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THE
Royal Pharmacopœa;
GALENICAL
AND
CHYMICAL,
According to the
PRACTICE
Of the Most Eminent and Learned
PHYSITIANS
OF
FRANCE,

And Publish'd with their several Approbations.

By MOSES CHARRAS, the Kings Chief
Operator in his Royal Garden of Plants.

Faithfully, Englisbed.

Illustrated with several Copper Plates.

L O N D O N:

Printed for John Starkey at the Miter within
Temple-Bar, and Moses Pitt at the Angel
in St. Pauls Church-Yard, 1678.

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THE
ROYAL PHARMACOPŌIA
GALLENICAL
AND
CULINARY



Illustrated with several Copper Plates
11. 2. 107

LONDON
Printed for John Sturges at the Miller's Arms
Topham-Bury and Miles's Row at the Angel
in St. Paul's Church-Yard, 1678

The Approbation of *Monsieur Anthony D'Aquin*,
Counsellor in Ordinary to the King in his
Councils, and First Physitian to his Ma-
jesty.

NOT believing that it could be honourable for France, at a time when by the care and liberality of one of the most famous Monarchs in the World, all Arts and Sciences have attain'd their utmost perfection, that Physick, otherwise in high esteem, should be beholding to forreign Pharmacopœa's for the preparation and use of such Medicines which are daily requisite to be prescrib'd, I thought it expedient, not only to cause Monsieur Charras to make such Galenical and Chymical Operations and demonstrations every year in the Royal Garden, as should be necessary for the instruction of young beginners in Physick; but also to give him the plat-form and design of a Galenical and Chymical Pharmacopœa, whereby the preparation of ordinary Medicines should be corrected from several faults, the number and goodness of particular remedies be repaid with interest to Strangers, from whose Works we have hitherto borrow'd, and the Publick be stor'd with advantage for the ease and cure of those maladies that afflict Human Nature. And finding that Monsieur Charras has very worthily acquitted himself of his charge, and fully satisfi'd me in my design, I willingly and freely give him my approbation. From the Camp at Quaivrain, the 29th of June, 1676.

D'AQUIN.

The Approbation of *Monsieur de la Chambre*,
Counsellor to the King in his Councils,
Physitian in Ordinary to His Majesty, and
First Physitian to the Queen.

IN regard that to this present time there has been no perfect Pharmacopœa, we cannot sufficiently praise those that make it their study: And we have great reason to hope that this of Monsieur Charras will contribute very much to that perfection which is wanting, since that besides the diligent inquisition which he has made after what has been most exactly written, he has highly better'd the ordinary preparation of Remedies, added a great number of particular Receipts, and made a most necessary Union of the two Pharmacies, by a clear and intelligible explanation. So

that this Work merits esteem, and cannot but be very advantageous to those who have any insight in Physick. This is the testimony which we thought our selves bound to give him in publick. From St. Germain en Laye, July 13. 1676.

LA CHAMBRE.

The Approbation of *Monsieur de Renaudot*,
Counsellor to the King in his Councils, and
First Physitian to *Monsieur the Dolphin*, and
Doctor Regent in Physick of the Faculty
at Paris.

THE Author of this ample and Royal Pharmacopœa, has not only made a faithful Collection of the most Important Medicines; but he has set them down so elegantly, and argues with so much force and clearness of wit, that it may be easily discern'd that he has not only been content to borrow from the most worthy Chief, and Head of Physick, the best part of the Remedies which he makes use of; but that he has also very happily employ'd his own judgment to embellish his own Work. He unfolds the difficulties which he meets with in reconciling Galenick and Chymical Medicines, which formerly seem'd incompatible, considering the different manners of their Choice, Preparation, and Composition, that there is no person who may not receive full instruction from thence, and who will not allow him to be one of the most famous Artists of his Age. This is the real opinion which I the first Physitian to Monsieur the Dolphin, Doctor Regent in Physick of the Faculty of Paris, have of this Book, upon a serious consideration, and of which I thought my self bound to give a publick confirmation. From the Castle of St. Germain en Laye, July 10. 1676.

EUSEBIUS RENAUDOT.

The Approbation of *Monsieur Esprit*, Coun-
sellor to the King in his Councils, and First
Physitian to *Monsieur*, the Kings only Bro-
ther.

THE Galenical and Chymical Royal Pharmacopœa, is a work of a solid wit, very clear, and full of all the reflexions that can be made upon the two Pharmacies. The precepts of both the one and the other are handld here with so much method and order, so much neatness, and with so many learned and new Remarks, that I find nothing wanting for
the

the absolute perfection of the work. The Author has attain'd it, by his study, by the labour of several years, and by the vast experience he has had, by the strength of his reason, and deep meditations upon the choice, preparation and composition of Remedies. So that we may say, that his Pharmacopœa is truly Royal; that there is nothing defective in it, nothing superfluous; that the beauties of it are singular, and not to be discover'd in any of the ancient or modern Pharmacopœas, as much esteem'd, and as much in use as they are. Therefore does this Work deem to be made publick in the Reign of one of the most Renowned of our Kings, and under the protection of one of his most principal Ministers, so zealous in every thing that concerns the advancement of Arts in this Kingdom, and the publick benefit; to which this Pharmacopœa is absolutely necessary, and will be always very advantageous. Paris, July 12. 1676.

The Approbation of the Dean and Doctors of the Faculty of Physick in the University of Paris.

WE the Dean and Doctors of the Faculty of Physick in the University of Paris, having heard the report of Mr. Anthony Morand, Peter Cresse, Lewis Gallais, and Peter D'Aquin Doctors of the same Faculty, and deputed by the same to read a Book entituled Pharmacopœe Royale, Galenique & Chymique, composed by Moses Charras, Apothecary, Artist of the King in his Royal Garden of Plants. That the said Work may be accounted one of the most accomplish'd pieces that has appear'd upon the subject, that the discourse is polite, the method easy, that it contains all the marrow of the Ancients, and the best of what has been discover'd of later Ages; that the Author has inserted several learned Arguments, and judicious reflexions; and lastly, that he was worthy the support and care of Monsieur the King's chief Physitian, by whose order he has undertaken it, and reform'd a great number of good Medicines. For these reasons, we by common consent have thought it convenient to be made publick, acknowledging that it will be very necessary for all those persons that give their minds to the study and exercise of Physick. In testimony whereof we have sign'd these presents. Paris, July 12. 1676.

A. J. MORAND, Dean.

The

The Approbation of Monsieur Fagon, Coun-
sellor to the King, Physitian in Ordinary to
the Queen, and Professor in Pharmacy at the
Garden Royal.

Monsieur Charras in this Pharmacopœa has made so exact a Collecti-
on of all that the Ancients and Moderns have afforded profitable
or curious in reference to Physick, that they who shall read this, may spare
themselves the pains of reading any other; and they will find without
all question, considering the labour of compiling, the method and neatness
of the Work, that it answers to the Grandeur of the Title, and the Repu-
tation of the Author. Paris, July 13. 1676.

Phyſick Books Printed for *John Starkey*, at the
Miter in *Fleetſtreet*, near *Temple-Bar*.

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tions and practices relating to women in Travel, octav.

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rariorum centuriam unam nec non oſteo geniam ſætuum in qua quid
cuſq; oſſiculo ſingulis accedat menſibus, quidve decedat & in eo per va-
ria immutetur tempora, accuratiſſime oculis ſubjiciuntur, 1670. quart.

Fortunius Licetus de monſtris ex recenſione Gerardi Blaſii, qui monſtra
quædam nova & rariora ex recentiorum ſcriptis addidit. Editio novif-
ſima iconibus illuſtrata, 1665. quart.

Baſilius Valentinus of natural and ſupernatural things; alſo of the firſt
tincture, root, and ſpirits of Metals and Minerals, how the ſame are
conceived, generated, brought forth, changed and augmented. Where-
unto is added *Frier Bacon* of the medicine of tincture of *Antimony*;
Mr. John Isaac Holland his works of Saturn, and *Alexander van Such-
ten*, of the ſecrets of *Antimony*, out of *Dutch*, 1671. octav. 2 s.

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quæ ex Indicis adſeruntur*, 1675. duodec.

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an account of the preſent State of thoſe Countreys, viz. of their Re-
ligion, Government, Cuſtoms and Commerce. As alſo the Figures,
Weights, and Value of the Money and Coins ſeverally current therein.
The Second Part, deſcribing *India*, and the *Iſles* adjacent.

THE

THE Royal Pharmacopœa, GALENICAL AND CHYMICAL.

THE FIRST PART.

Concerning the Generalities of Pharmacy.

CHAP. I.

Of the Definition and Names both of the one and the other Pharmacy.

PHARMACY is the second part of that part of *Physick* that attends the Cure of Diseases, and teaches the Choice, Preparation and Mixture of Medicaments. This Definition might suffice, did we not know of any other *Pharmacy* then that of the Ancients, which is call'd *Galenic*. But in regard the *Chymical Pharmacy* of the Moderns has many perfections that are peculiar to it, and that thereby the benefit of the *Galenic* is much improv'd, it deserves to have a particular Definition. I will say then, without swerving from the first general Definition, that *Chymical Pharmacy* ought to be defin'd to be, An Art which teaches us to dissolve bodies, and by the same means to divide and know the parts of which they are compos'd, to the end we may separate the bad, and preserve the good, and unite them again when occasion requires. For,

Dividit ut purget, purumq; exaltet, & artet.

The Name of *Pharmacy*, which is common to both, is derived from the *Greek* word *φάρμακον*, which signifies a *Medicine*, in regard it is the work of both to compose Medicines. The word *φάρμακον* is compounded of *φάρ* and *μακον*, as one should say, *I bring a Remedy*. We call the *Galenic Pharmacy*, which has been very ancient, that which was known and practis'd by the *Greeks*, *Romans* and *Arabians*, which has been very much improv'd by *Galen* and his Followers, and to this day is very much in esteem. We call the *Chymical Pharmacy*, that which was not known but to some few of the Ancients; but which at present is very much approv'd and practis'd by a very great number of the Moderns, who have made it their study, and by their continual Industrie have brought to light, and unfolded many Mysteries that lay before conceal'd in riddles, and by that success have encourag'd others to follow their example.

The most receiv'd Etymology of the word *Chymistrie*, is that which is deriv'd and τ χυμωδ, from *Juice*, in regard it teaches how to extract the most pure and liquid parts of Compounds, and to separate them from those parts which are more impure and gross. Others derive the word from $\chi\epsilon\omega$, to melt or dissolve; from whence they also fetch the word *Chymia*, which some Lexicons expound to be a *Melting* or preparation of Gold and Silver, being substances upon which *Chymistrie* practises a vast number of preparations. The Name of *Alchymie*, which some have attributed to *Chymistrie*, is deriv'd from the *Arabick* word *Al*, which sometimes signifies the Excellencie of a thing, and sometimes *Salt*; in which sence it may signifie a dissolving or preparation of Salt, which is one of the most essential parts of *Mixture*.

Others have stil'd *Chymistrie* the *Hermetic science*, alledging without ground that *Hermes* was the Inventor thereof, to whom for that reason they gave the Name of *Trismegistus*, or *Thrice great*. Some, not improperly, have call'd it the *Art Distillatorie*, in regard that it accomplishes many of its operations by Distillation. *Paracelsus* and several others have nam'd it *Spagyric Pharmacy*, which is a composition of two *Greek* words $\sigma\pi\alpha\gamma\mu\alpha$, to separate, and $\epsilon\gamma\gamma\iota\sigma\tau\epsilon\omega$, to gather together; for it separates the pure from the impure, and unites and gathers together the pure parts, when the impure are separated from them. I omit those other Names which others have ascrib'd to it, as *Pyrotechnie*, or the *Art of working by Fire*; the *Sages* or the *Philosophers Art*; the *Secret Art*, and many other Names, which I pass over in silence.

CHAP. II.

Of the Subject, Object and End of both the one and the other Pharmacy.

ALL natural things created may be compriz'd under the Name of Medicament; and they are equally the subject, and object both of the one and the other *Pharmacy*: So then I say, That Medicament is the general matter that a Student in *Pharmacy* ought to consider, and know both externally and internally, and which he ought to understand how to prepare and mix as occasion requires for the use of *Physick*. The exterior knowledge of Medicament is less difficult; because, that I may speak properly, it is onely superficial: Nevertheless it does not want some difficulty, in regard of the largeness of its extent, and the vast variety of mixtures which are comprehend'd under the Name of Medicament. But the internal knowledge dives into all the parts, whereof Mixture or simple Medicaments are compounded. And this requires much more skill and experience than the former. Nor can it be obtain'd but by preparation, and by making an exact dissolution of all the parts, which cannot be accomplish'd without the help of *Chymical Pharmacy*.

Though the Body of Man be the remote object both of the one and the other *Pharmacy*, it ceases not however to be some part of its subject, in regard it affords parts which are in truth Medicaments, as the Brains, the Blood, the Fat, the Hair, &c. which a Student in *Pharmacy* ought to consider, and understand how to prepare.

The end of a *Physician* is twofold, to understand the internal which is the true knowledge, and tends to the perfect preparation of Medicaments; and the external, which is the health of Man, for which the *Physician* chooses, prepares, and mixes all his Medicines. The first may be also call'd the *Next End*; the other may be term'd the *Remote End*.

CHAP. III.

Of the Principles of Chymical Pharmacy.

Without making any stay upon the opinion of the Ancient Philosophers, who founded the principles of all things upon the four Elements, which they affirm'd to be Air, Fire, Water and Earth, I take part with the Chymical Authors, ancient and modern, who acknowledge no other principles than those which they meet with by Art in the dissolution

lution of all Compounds. Plants, Animals, and Minerals, are equally compos'd of these principles, and we find them very distinctly in the resolution of their parts; especially of those whose substance is not extraordinarily compacted. These Principles consist in five different substances; of which the three principal are call'd *active Principles*; the other two of lesser note, *passive Principles*. The three first are called by the Names of Salt, Sulphur and Mercury, by reason of their agreement with Salt, Sulphur, and Mercury natural. They are called *active*, because they include within themselves, a quality, vertue or power that produces *action*. Salt is esteem'd to be the ground of all flavours; Sulphur, of all odours, and combustibility; Mercury, of all colours. Flegm and Earth are the two last principles, which are said to be *passive*, as well to distinguish them from the former, as also for that they cannot produce any considerable action. They are also call'd Elementary principles, by reason of their conformity with Water and Earth, which were the grosser Elements of the Ancients.

In the distillation of Compounds, the insipid Flegm, which is like Water, appears usually first of all. Next to that comes the Spirit, to which we give the name of Mercury: In the third place appears the Oyl, which we call Sulphur. The Salt, under its own proper name, is found last of all, mix'd amongst the Earth; which remaining in the Filtre, after the separation of the Salt, is lookt upon as the last principle.

Nevertheless we find that the Salts of Animals and certain Creatures, rise in distillation among the other substances, and that in *Rectification* they also rise first, by reason of their great volatility, and that there remains but little fixed Salt among the terrestrial part which is found at the bottom after distillation. We also find many times that the Flegm, the Spirit, the Volatile Salt and the Oyl, rise in distillation confusely together: and that you must of necessity have recourse to *Rectification* to separate and purify them. But though Flegm and Earth are accounted *Passive principles*, and have less vertue than Salt, Sulphur and Mercury, which are the *Active principles*; yet are they not altogether to be despis'd. For besides the necessary rank which they hold in the composition of Medicaments, they have their particular vertues and uses, when they are separated from the other principles by distillation, or any other way of preparation. Which obliges me to discourse of them, as well as of the rest, according to their order in distillation.

CHAP. IV.

Of Flegm.

Flegm is a principle reputed to be passive, which most usually rises first in the distillation of Compounds: especially of such mixt bodies, wherein it abounds. They who agree the Elements to be principles, suppose Flegm to be the Element of Water; which it most resembles, when well separated from the rest of the principles. Flegm, though to outward shew it appear thin, and almost void of any consistency, is a substance which most abounds in the composition of mixt bodies; especially of Plants and Animals.

Flegm separated from the other substances of the mixt body, doth not lose its vertue. For it curbs the activity of the Spirits, and qualifies the acrimonie of the Salts, if united to them; it also serves to dissolve them, and all watry substances. It unites with the Oyls, by the help of the Salts. It is proper in the extraction of several Tinctures, especially of substances, to which it had been united. It is proper in several Fermentations, Distillations, Humectations, and several other Operations. It qualifies the heat of the Oyls; and binds and unites the Earth with the Salts, redressing the drieness and brittleness of the latter. It refreshes and moistens being alone; but easily receives the impressions of those substances with which it is mix'd; it easily corrupts, when mix'd with moist substances that are strangers to it; and hastens their corruption and dissolution. But it may be preserv'd a long time alone in a bottle well-stopp'd. It soon evaporates in the open air, but sooner in the Sun or against the Fire. It usually observes the motion and action of the Spirits, Oyls or Salts, with which it is mix'd; and from which at all times it may with ease be separated. It ascends in distillation in clear clouds, which presently dissolve into water. In that it differs from the Spirits and Oyls, whose vapors or clouds are much thicker, and harder to be dissolv'd.

CHAP. V.

Of the Spirit.

THE Spirit, denoted by the Name of *Mercury*, is an airy, subtle, penetrating substance which usually ascends in distillation after the Flegm is rais'd. This Spirit is more or less subtle and penetrating, according to the nature of the mixt Bodies out of which it is drawn. For the Spirits of Vitriol, Salt, Nitre, and Sulphur, are much more piercing than that of Vinegar; and the Spirit of Vinegar much more penetrating than those of Gñiacum and Allum: and by consequence a Spirit of more force and efficacy will act more powerfully than one which is weaker. The property of a Spirit is to penetrate, cut, and open compacted and solid Bodies. It eats, putrifies, breaks, dissolves, and burns certain mixt Bodies. It coagulates others, as Blood and Milk, and separates the terrestrial from the watry parts. Certain Spirits being well purifi'd from their Flegm, and mingl'd with water, will cause a heat so vehement therein, that hardly a Man shall endure his hand in it: nor is it an easie matter to keep the Vessels from breaking that contain it. The Spirit presently extinguishes the flame of the Oyls; it joins immediately to the Salt, and sometimes unites it self so closely to it, that nothing but a violent Fire can separate it. It heats of it self, but being mingl'd with a small quantity of cooling liquors, it augments their coolness, and causes them to penetrate. It dries alone, but moist'ns being mingl'd with Flegm, and helps to preserve it. It gives it its own activity and strength, according as it is mix'd with it, either in a greater, or lesser quantity. It allays and qualifies the Acrimony of the Salts, and is by them reciprocally qualifi'd. It incorporates with them, and fixes their Volatility. It is us'd for Tinctures, and for diversity of colours, which it changes, and sometimes utterly destroys, according as it is us'd. It dissolves Minerals, and precipitates those that were dissolv'd by their Salts. It serves for the nourishment of Plants and Animals, and gives motion to the latter. It dissolves Stones, purifies the Blood; it restores and renews the radical moisture. It restores the speech to them that have lost it. It cleanses and purges, being mix'd with its Flegm. It kills all sorts of Scurfs and Scabs; and allwages all sorts of pains caus'd by the Salts. In short, it will give considerable relief to an abundance of Distempers, especially those that proceed from the acrimony of Salts, if rightly order'd and prescrib'd with judgment.

I refer the Volatile Urine Spirits, to the Chapter of Salt, as being more of the nature of Salt, than of the acid Spirit.

CHAP. VI.

Of Sulphur.

Sulphur, acknowledg'd to be the third Principle, is a homogeneous, liquid, oylie, viscus and combustible substance, which in distillation ascends usually like Oyl after the Spirit; which being purifi'd from the terrestrial and salt parts, is lighter than the Flegm, the Spirits, and all the other substances, so that it swims above them all; but while it still contains those parts of Earth and Salt, it swims between the other substances, or else it sinks to the bottom, according as it is more or less intermixt. Sometimes also it happens, that one part of the Oyls swims above the Flegm, another part between it, and a third part falls to the bottom; as is often observ'd in the distillation of ponderous Woods. Sometimes likewise it happens, that the same compound Body yields Oyls distinct in colour, that swim one above another, as is observ'd in the distillation of Turpentine, where are to be seen Oyls of three different colours, that swim one above another; not to mention the Spirit, or rather Ethereal Oyl that swims above all the rest. The viscosity of this Principle occasions it easily to stick to those substances that rise with it in distillation; and particularly to the Salts, or to some other gross and terrestrial parts: So that there is no way to separate it truly, but by Rectification, which separates and raises it above all the other Principles. This Sulphur, being like Oyl,

Oyl, is a substance between Spirit and Salt, so that it may be united to them by Circulation, for the making of Elixirs, Universal Medicines, and all the rare preparations of Chymical Pharmacy. This sulphurous Principle being separated from all the rest, not only resists cold, but of it self never congeals. It is incorruptible, and so preserves those Body's that are embalm'd within it, so that they do not too excessively abound in Flegm. It mortifies the acrimony of the Salts; it unites and coagulates with them: It resists Spirits, and Aquafortis it self, that it can do no good upon it. It cherishes the natural heat. It is a great Friend to the Nerves, and facilitates the motion of the Muscles: It is the Balsom of all things. It is a mollifier, lenitive, discussive, and an allwager of pain. It increases the Spirits, in Vegetals and Animals. It is as it were the Soul of Minerals: It is the matter and foundation of all Odours and scents; and keeps in the middle between the driness of Salt, and the moistness of the fluid Spirit.

CHAP. VII.

Of Salt.

Salt is the Spirit, which after distillation usually remains mixt with the Earth; which being separated, purifi'd, and dry'd, looks of a white colour, of a dry and brittle consistence. Salt is easily dissolv'd in moisture, and being dissolv'd, it indures the Oyl: It may be also join'd to the Oyl by virtue of the Spirit. Though this Salt seem to us to be very dry, nevertheless there is an internal moisture in it, which renders it apt to run with a great fire. Salt resists Fire, and is purifi'd thereby. It is incombustible, and may be preserv'd as long as you please without any loss, or suffering any alteration of its own nature: The taste thereof is tart and sharp, with a little bitterness: From whence it has been tak'n for the foundation of all flavors; though the other Principles are not without them, by reason of some Particles of Salt that may remain in their substances. It is hot and penetrating; it hast'ns the running of Mettals; it helps to preserve all substances. It attracts to it self all that are volatile, and fixes them. It strongly unites with the Spirit, insomuch that if the Spirit exceed it three or four times in quantity, it ascends with it in distillation. It coagulates certain Liquors. It purges, cleanses, opens, resolves, dries up, and consumes superfluous humours. It hinders the consumption of the Oyl. It is the Life and Soul of all substances. Without it the Earth is barren; through the excess of it, it becomes unfruitful. It preserves Animals in health and makes them fruitful. It consolidates all substances, especially Minerals; and makes the Spirit corporeal by joining with it. By the way observe, that the Salt of Animals, as also of certain Vegetals, is not found among the Earth at the bottom after distillation: in regard that by reason of its volatile nature it rises like a kind of Spirit, among the Oyl, and with some part of the Flegm; whence it may afterwards be separated by Rectification. This volatile Salt has some of the qualities of that which I have already mention'd; but its volatileness carries it thither, where the other cannot reach of it self without the help of this. It penetrates in an extraordinary manner, so that neither the Eyes, nor the Nose can endure the strength of it, in any great quantity; by reason of its volatileness it cannot resist Fire, which it cannot endure, unless mingl'd with some acid Spirit, or with some fix'd Salt that surmounts it in quantity. The volatile Salt is too smart upon the Nose, the Tongue, the Eyes and the Brain by its penetration; but it neither has the acrimony, nor the bitterness of the fixed Salt; nor does it leave any considerable heat behind it, either upon the Tongue, or any other place.

CHAP. VIII.

Of Earth.

Earth is the last Principle, and the less esteem'd of all. It appears last at the end of Distillation and Calcination; and when the Salt which was mix'd with it is drawn out

out of it by Dissolution and Filtration. This Earth thus separated from all the Principles is called *Caput mortuum*, or the *Dead Head*, by the Chymists, having no other considerable Quality but astringency and driness. This Principle however is very necessary in the composition of mixt Bodies: for while the Sulphur makes it tenacious, viscidous and clammy; while the Salt makes it hard and firm; while the Spirit affords it nourishment and motion; while the Flegm is the cause of growth, and tempers all the other substances; from the Earth it receives a consistence necessary for its preservation: so that there is no substance in a mixt Body which has not its proper office, and particular service. The Earth after the dissolution of the mixt Body is that which troubles all the active Principles, and must be separated from them; for when it is mix'd with them, it hinders their action; It stops the Pores, it engenders Obstructions, it incorporates with the salts and spirits, and begets stones in the bladder and reins, and very much contributes to the Original of several Diseases. The Earth separated from the other substances is often porous and very light; it easily unites it self with the substances from whence it was separated. It borrows the weight of the other Principles, especially of Salt and Spirits which are the heaviest. The use of it in Physick is only exterior, where there is any occasion to close up and fortifie the parts.

CHAP. IX.

Of Medicament in general.

M*edicament* is defin'd to be any thing that is capable to change our Nature for the better. Medicament is divided into Internal and External; and both those into Simple and Compound. The Simple Medicament is that which is produc'd by Nature, though it be in truth compos'd of all the five Principles already mention'd. The Compound is that which depends upon several Simples different in vertue, and mingl'd artificially together. Sometimes a Compound Medicament may bear the Name of Simple to distinguish it from another more compounded, which carries the same Name. *Aliment* differs from *Medicament* in this, that being taken inwardly it nourishes and increases our nature: whereas Medicament can only alter it, whether outwardly apply'd, or taken inwardly.

Poyson differs from Medicament in this, that it destroys our Nature: but it may pass for Medicament, in regard that Pharmacy is able to correct and tame whatever it has of wild and mischievous, and render it wholesome, as well when giv'n inwardly, as when outwardly apply'd.

Medicaments differ among themselves, either in their matter, or in their vertues.

The matter of Medicaments is taken from Vegetals, Animals, and Minerals.

By Vegetals I understand Trees, Shrubs, Brambles, Herbs with all their parts; all things that belong to, or grow upon them; and in general every thing that has a vegetative Life, and which receiving nourishment from the Earth by some sort of Root or other, grows either above, or near the superficies of the Earth; like the real Plants whose name is common with that of Vegetals. So then we are to comprehend under the Name of Vegetals, Roots, Stalks, Bark, Wood, Boughs, Leaves, Flowers, Berries, Cods, Seeds, Gums, Rosins, Juices, Tears, Liquors, distilling Waters, Kernels, Mushrooms, as well those that grow out of the Earth, as upon Trees and other places; Water-Nuts, the excrescences of Trees, as Mistletoe, Moss, Cottons, Galls, Thorns, Sugar, Manna, and several other Plants which it would be too tedious to repeat.

By Animals I understand Fowl, Land-Creatures, Water-Animals, and such as are accustom'd to Land and Water: and not only such as are made use of whole, as Scorpions, Frogs, Worms, Chestops, little Dogs, Emmets, Cantharides, Lizzards, &c. but all the parts of the bodies of Animals, which may be us'd in Physick, not excepting their excrements and superfluities, as are the brain, the fat, the blood, the hair, the dung, the urine of Men; the horn, the pizzle, the stones, the suet, the marrow, the bone of the heart of a Deer; the liver and inwards of a Wolf; the grease, milt, the yellow stones, and bone in the heart of an Oxe, the foot of an Elk, the lungs of a Fox, the brains of a Sparrow, the tooth of an Elephant and a wild Boar, the horn of a Unicorn and Rhinoceros. The ring-bone, hoof, fat and dung of a Horse; the dung of a Mule, or Ass, Musk,

Musk, Perles, Bezoar, Shells. The jaw of a Pike, the claws, stones, and juice of Craw-fish; the blood, and fat of a Wild Goat, and Kid. The heart, liver, trunk, head, tayl, fat and skin of Vipers; the fat, and sperm of a Whale. The liver, and fat of Eels; the bone of a Toad, the greafe of Bears: the greafe, and stomach of a Capon; the feathers of a Wood-cock, and Partridges; the stinking oyl of Bezoar-stone. The greafe of Hogs, Badgers, Geese, Ducks, and several other Animals. The dung of Cows, Dogs, Mice, Lizards, their bones, their skins, their excrescences, their hair, their urine, their sweat; and in general whatever appertains to the bodies of Animals.

By Minerals I understand all Metals, Half-metals, and what belongs to Metals. All sorts of Earths, and Bole-Armoniack; all Stones, Marbles, Flints, Porphyries, Jaspers, Chrystals, Jacinths, Emraulds, Saphirs, Granats, Blood-stones, Diamonds, and all sorts of Jewels: Sulphurs, Vitriols, Allums, *Sal Gem*, Bay-salt, Water, Rain, Snow, Ice, Hail, Thunder-bolts, Dew, Manna of several sorts, Morter, Lime, Brick, Oyl of Naphta, Amber-greece white and yellow; Jet, Sea-coal and all Bitumens. Talk, Chalk, Bismuth, Zink, and all Marcasites, the ordinary Earth, Sand, Clay; and in general whatever is drawn out of the Bowels of the Earth, or Sea; or descends from the Air, being without Life. Some there are that add to these, Corals and Spunges, which others will have to be Plants.

Here I might take a fair occasion to make a large Catalogue of all the principal simple Medicaments, wherewith Vegetals, Animals, and Minerals, furnish *Pharmacy*; but the unprofitable confusion and perplexity, which I have observ'd in some *Pharmacopaeas*, have diverted me from it, and have made me resolve not to speak of them any otherwise in the progress of this Treatise, than as necessity shall lead me to make more particular Illustrations upon some that need a peculiar explanation.

CHAP. X.

Of the Vertue of Medicaments.

THE Vertue of Medicaments may be defin'd to be a proper and inseparable accident, upon which their action depends. So that we may say, that the Faculties, or Vertues of Medicaments cannot be well known, but by their action or operation. We observe three Vertues in Medicaments, the altering Faculty, the purging Faculty, and the strengthening Faculty. The altering Faculty is known by the manifest alteration which it makes in our Bodies. The purging Faculty carries away the ill humors, either by expelling them, by making the passages slippery to make them way, or by attracting them together, and forcing them out at the usual vents of Nature. We may comprehend under *Purgative*, the *Diaphoretic* Faculty, which sends forth evil humours through the Pores of the Skin; and the *Diuretic*, which expells them by Urine. The strengthening Faculty, or Vertue, fortifies and preserves the Body, or some one of its parts, by a specific operation.

There are three sorts of Vertues attributed to Medicament. The first sort, which by the Ancients was esteem'd Elementary, and only ought to be attributed to the Principles whereof it is compos'd; that is, that it heats, cools, moistens, and dries; and, still to follow their opinion, sometimes obscurely in the first degree, sometimes manifestly in the second, sometimes violently in the third, and sometimes to extremity in the fourth. They also give to each degree, a beginning, a middle, and an end, which denotes the diminution or excess of heat, cold, moistness, or driness.

The second Qualities are the Products of the first: For the property of heat is to open, rarefie, attenuate, attract, &c. The property of cold is to thicken, to condense, to stop, to repell, &c. The property of moist is to moisten, mollifie, &c. The property of driness is to knit, hard'n, and dissipate humidities, &c.

The third Qualities are hidd'n, and we can only find them out by experience. As when a Jasper apply'd to a Wound stops the blood: when a Toad dry'd, being held in the hand, stays bleeding at the Nose, and allwages the Tooth-ach, which is also perform'd by the Bone in the Fore-leg of the same Toad; when a Stick of Ash, boy'd under a certain Constellation, stops all losses of blood; when a Hazle-Stick, gather'd in its proper

proper season, heals all contusions; when the Eagle-stone hung about the neck, hinders abortion; and hastens and facilitates the Birth, being ty'd to the thigh: as when a straw cleaves of it self to Amber, or Spanish-wax, Iron to the Load-stone; as when certain Plants ty'd to a Horses tayl, heal the Farce: and several other effects of the same nature, of which Philosophers labour to give the natural reason.

CHAP. XI.

Of Election, or Choice.

EVery Artist ought to understand the matter of which he intends to make use, before he undertakes the cure. And therefore with great reason Pharmacy is oblig'd to begin its operations with Election.

Election is the discerning and choice of a good Medicament from a bad one. We may also alleadge it to be the discerning and distinguishing of every particular Medicament, when there are several of a various nature mingl'd together.

The Ancients by the word Election, did not mean a knowledge as inward and secret as we could obtain by the help of Chymical Pharmacy, which by the means of proper dissolvents, resolves the bodies into the principles whereof they are compos'd, whereby we gain an inward knowledge of all their parts; but they only intended a superficial knowledge of the true Character of every drug. Now both the one and the other of these two skills cannot be principally acquir'd but by the help of the Senses, which are Seeing, Smelling, Tasting, Hearing and Feeling; which are not always necessary altogether, to discern every Mixture separately, in regard there are some that may be distinguish'd only by the Sight, others by the Smell, others by the Taste, others that require a concurrence of more Senses than one towards a more perfect Election. And though that without the Tryal of fire, all the Senses together cannot furnish us with an exact knowledge of all the parts whereof mixt bodies are compos'd, yet they afford us enough to discern one mixt body from another, and the good from the bad; and as much judgement as is requir'd to select them for such and such occasions, or else to make a separation of them by Chymistry.

Election is made from the Essence, the Substance, or the Qualities of the mixt body. The Substance mainly conduces to the knowledge of the Essence. The Qualities assist to the knowledge of both together, adding thereto the tryal of the exterior disposition of the mixt body. By Substance we understand a certain couching or joyning together, or a consistency of matter, which is found out by the mixture and the proportion of the five principles. Whence it comes to pass, that some mixt bodies are very heavy; others light, some close, others spungy; some coarse, others fine; some brittle, others clammy, &c.

The Sight serves to discern colours, and the various external dispositions of mixt bodies: it discovers also the internal disposition when the body is open'd by breaking, cutting, or otherwise.

The Smelling receives through the Nostrils a certain evaporated substance that rises from the mix'd body, and is carry'd to the Brain. The difference of Odours is so great, that it is impossible to relate the variety; but only by comparison we may guess by the affinity or remoteness of scent, what congruity one mixt bodie may have with another. Nor indeed are there above two differences, the one good, the other bad; though each of these may differ from their like, in the degrees of more or less.

Feeling serves to distinguish the smoothness or roughness of the mixt bodie: but the chief use thereof is to distinguish between heavy and light, hard and soft. Feeling is also to be made use of, when because there can be no positive judgement made of the exterior part, there is a necessity of breaking or cutting into the in-side. It serves also to understand the viscosness or brittleness of a mixt body.

The Taste is a Sense which is as much or more necessary than any of the rest, by reason of the diversity of Savours in mixt bodies; which proceeds from the various nature of the Salts, that are mix'd in the Composition of their Substances: and for that Savours are easie to be distinguish'd and describ'd.

Authors unanimously acknowledge nine simple Savours; of which they will have three to be hot, three to be cold, and three temperate. The tart, the bitter, and the

the salt they place in the rank of hot Savours: The stiptic or sowre, the sharp, the eager, in the rank of cold Savours: The oylie, the sweet and the insipid, they alledge to be temperate.

The Hearing is of least use in the election of mixt Bodies. For it only serves to judge of their parts when they are clos'd up in their Covers, as the Eagle-stone; or in their rinds, as *Cassia*, whether it be moist or dry'd up; or in their cods or husks, as several Seeds: unless we may bring it to the sound of Metals, the knowledge whereof is more useful in the course of common dealing, than in *Pharmacy*.

The practice of these Senses has been the rise of several general Rules, not only for the knowledge of mixt Bodies; but also for the prescription of them, which ought not to be unknown.

For it is necessary to examine the lightness of Medicaments that purge by attraction, as Agaric, Colloquintida, Scammonie, and Mechoacan; yet this Rule admits of some exception. For Jalap, Hermodactiles, and Turbith, are accounted more rosinny and best, when being dry they feel a little weighty.

'Tis necessary to examine the weight of Medicaments that purge by compression, mollifying and lenifying, as Rhubarb, Cassia, Mirobalans and Tamarinds.

The soft and smooth superficies of a Medicament, is to be preferr'd before the hard and rough. Remedies moderately hot, are to be preferr'd before cold; moist before dry. Hot and moist excel cold and dry. 'Tis also necessary to choose good Scents, and to avoid bad ones: and to act quite contrary in some Hysteric distempers of Women, who cannot endure the scent of sweet odours, which are only then to be employ'd in the lower parts.

Savours perfectly sowre are naught: those whose 'sowreness is accompany'd with a kind of stiptickness or restridency, are less hurtful; bitter and stiptick are the least hurtful of the three. Sweet is the best of all Savours, insipid next; acid-sweet holds the third place, bitter-sweet the fourth, sweet and stiptick the fifth.

CHAP. XII.

Of the Place, Number, Bigness, Neighbourhood and Time which concur to the choice of a Medicament.

AS to the Place; we must observe that Plants, which grow of themselves in a place that is free and proportionable to their nature, are to be preferr'd before those which are transplanted, and nourish'd by Art. That Plants which grow in the Mountains, especially those that lye to the East and South Sun, are to be preferr'd before those of the same sort that grow in Valleys. That a Plant hot and tart that grows in a moist place, has less heat and less tartness than that which grows in a dry place. That that plant, which abounds in superfluous moisture, will be far better in a dry than in a moist place.

The most part of those Rules which are observ'd in reference to the Native place of Plants, are to be follow'd in the choice of Animals us'd in *Physick*, and which serve us for food.

As for Minerals, there is nothing more to be observ'd, but onely to procure them from such places where they are the fairest and most pure.

As to the Number and Bigness, it is to be observ'd, That Plants accounted good, but more especially Fruits, are the better, the less their number is; but hurtful Plants and mischievous Fruits, have less malignancy, where they are most abundant. That a Fruit good of it self, is esteem'd the better the bigger it is. The contrary is to be observ'd in Fruits, and other parts of Plants, as also in Animals that are hurtful. I say nothing to Minerals at this time.

As to Neighbourhood, Mistletoe and Polypodie are to be commended that grow upon Oaks. *Dodder* of time, and *Dodder* it self that grows upon hepatic Herbs. *Cham-pignons* growing under rotten Trees, are to be rejected; as also Plants that grow near Houses of office, and in shady places, where the Sun cannot come; unless they be such Plants as naturally grow in shady places, as Maidenhair, Liverwort, and Harts-Tongue.

The Time proper for the gathering of Plants, depends upon the diversity both of them, and of their parts, as also upon the use which they are to be put to. Fair weather must be always waited for. Fruits must be gather'd when they are fully ripe; as also Berries and Seeds. Herbs with their tops when they are in their full vigour, and as near as may be in the full of the Moon. Flowers, when they are in their full bud, and before they are quite blown, and before the Sun has wither'd 'em. Roots must be gather'd in the beginning of the Spring, and when the Herb begins to sprout forth. Woods must be cut after the full of the Moon. Tears, Gums, Resins, and distilling Juices, before they are melted by the rays of the Sun, or wash'd off by the Rain. Rinds and Barks, when the Plants are full of sap.

As for their preservation, the parts of Plants and Animals must be dry'd with all convenient speed, by laying them in the Sun, which are of a compact and humid substance; by exposing them to the Air and shade, which are of a thin and slender substance; by keeping both the one and the other, when they are well-dry'd, close shut up in Boxes, and those Boxes in dry places, expos'd neither to the Sun, Wind nor Rain.

Rain, which we have plac'd among the Minerals, ought to be preserv'd about the Vernal Equinox; Snow and Ice in their season; the Spawn of Frogs in *March*. Dew and *Manna* in *May*, gather'd from wholsom Herbs. Ambergreese, Amber, Jet, Oyl of Naphtha, and all sorts of Bitumens, before they are chang'd by the Sea or River-water, by the Sun or the injury of Time.

Animals, the soundest and most vigorous, are to be made choice of; whether they are to be made use of whole, or in any of their parts. I will not here speak of their Conservation, which depends upon their Preparation, of which more in due place.

CHAP. XIII.

Of Preparation.

Animals, which God has subjected to the power of Man, have those advantages where-with Men are altogether unprovided. For besides that as soon as they are born, they are in a condition without help to provide for themselves all things necessary for their subsistence; as also for their own cures, when they are sick; that nourishment which is proper for them is always ready, needing nothing of Art to cook it. Neither boiling nor washing are in use among them, nor being accusom'd to eat more, then for those Remedies for which Nature has design'd and prepar'd them herself. But Men have need of a thousand Preparations for their necessities. For notwithstanding those advantages which they enjoy in being advanc'd to a degree little below that of Angels, to have Reason and Understanding, and to know that all things were created for their use; yet are they not able to cure their Distempers, not so much as to nourish themselves, without the Preparation of Food and Physick. For how much labour and preparation is requir'd before Corn comes to maturity? How much more before it can be made into Bread? What toyles are requisite to the making of Wine, Vinegar, Beer and Cider? What pains to provide the very Food appointed for our nourishment? We must not wonder then if Medicaments so necessary for them, have need of Preparation, or that there is a necessity for Men to have recourse to Persons that understand how to know, prepare, and administer them according as occasion requires.

As to the extent of the matter of Medicament, it is easie to judge that the number of Preparations cannot but be very great. And so much the more, in regard the *Chymical Pharmacy* has very much augmented those, which the *Galenists* have for so long time together practis'd. Now in regard it is the design of this Work to comprehend both the one and the other *Pharmacy*, and that they have both need of the mutual assistance of each other, I thought it very much to the purpose to rank them both together, seeing they both aim at the same end, which is the Health of Mankind.

Preparation, is an Artificial labour whereby a Medicament is brought to that condition which the use of it requires.

Medicaments are prepar'd for several purposes; sometimes to augment their Virtue, sometimes to diminish it; sometimes to separate some evil quality, or correct its mali-

malignity; sometimes to unite them with some other; sometimes to alter their Nature, or communicate their Vertue; and sometimes to accommodate them to the habit and constitution of the Patient. Whence it comes to pass that the same Remedy prescrib'd to several Persons will require several Preparations, especially when it comes to be us'd.

The Preparation of a Medicament is accomplish'd after three general manners: by adding, abating, and changing the condition of the Medicin. Oyl is added to Wax to make it softer; a Medicament is infus'd in some Liquor, to the end it may communicate its Vertue. Sugar or Honey are added to Powders, for the making of Compositions. Sulphur is added to Nitre, Nitre to Antimony; *Aqua-fortis* to Mercury, &c. We take away the Kernels from Mirobalans, the Earthy Substance from Scammony, the moisture from Salts, the Pith from Roots, the white of red Roses, the yellow part of Saffron, &c. The alteration of Medicaments is perform'd several ways, as we shall shew by the examples of the following Compositions.

CHAP. XIV.

Of Lotion, or Washing.

MEsues, and the most part of the Ancients, have compriz'd all Preparations under four that are principal; *Lotion* or Washing; *Trinuration*, crumbling, or beating in a Mortar; *Infusion*, and *Cottion* or Booyling; of which they have set forth several sorts. The two first are of the smallest extent; but the two latter, which are of a larger extent, will furnish us with a great number of sorts: especially in the *Chymical Pharmacy*, the explanation whereof deserves to be better known.

Lotion is perform'd by plunging or washing a Medicament in water, or in any other Liquor. It is either slight and superficial, to wash away the dirt, as when we wash Roots and Herbs; or internal and penetrating, either to carry along with it the more subtle parts of the Medicament, as when we wash *Litharge*, Antimony Diaphoretic, &c. or to carry off some Salt or corrosive Spirit, as by the fore-mention'd washing of Antimony, as also of *Precipitates* and *Magisteries*: Or to take away some ill quality, as in the washing of Oyls, Suets and Turpentine, &c. or to imbibe into the Medicament some part of the Liquor wherein it is wash'd, as in *Galen's* Sear-cloth; or to communicate some good quality to it, as by the washing of *Tusia* in Rose-water, Wax to whiten or blanch it, Pomatums in Aromatick-waters to give them a good scent; or to separate some internal part, as when we wash *Lapis Lazuli*, having first made it red-hot in the Fire.

In Washing there is an operation made use of, which is call'd *Sloping by inclination*, when we pour the Water gently out that swims above the Substance. This is practis'd not onely in Lotions, but in Tinctures, and upon several other occasions.

Washing of Aloes is an improper term; it being only a Dissolution of the more pure parts of the Aloes, to separate them from the impure. There are several circumstances to be observ'd in the Lotion of Medicaments, according to the diversity of their Substances, which will be more seasonably treated of in the practice of Lotions, which I will shew in the following part of this Work.

CHAP. XV.

Of the Purgation of Medicaments.

TO purge or cleanse, among the *Apothecaries*, are terms synonymous, having both the same force of signification. And I therefore treat of the Purgation of Medicaments next to Lotion, because Purgation takes quite away those superfluities that Lotion cannot carry off. We take from *Coloquintida* its grains; from Dates, Prunes, Apricocks, Tamarins, and many other sorts of Fruits their stones; from Grapes the same; from the cold Seeds, and those of *Carthamus* or bastard Saffron, Citrons and many other

others, their husks; from the Roots of Eringo's, Fennel, Cichorie, Asparagus, and the like, we take out the pith, and other superfluities. From green Wall-nuts the rind, and from dry ones the shells, as also from Almonds and small Nuts; we take off the superfluities from the Roots of Mountain *Spikenard*, and Couch-Grass. We make no use but of the hairy threads of *Spikenard*; we use the flowry tops of some Herbs, and fling away the rest; we take away the membranes and fibers out of *Castoreum*, as also the unctuous part when it is to be swallow'd. We only make use of the oylie part when we use *Castoreum* for Oyls and Oyntments. We only take the Body, the Heart, the Liver of a Viper dry'd, to powder; and only the Fat, to make *Emplastrum de ranis*. Nevertheless sometimes we use the Viper whole, when we stuff them and preserve them in Spirit of Wine. We throw away the wings and feet of *Cantharidis*. We only use the reins of the Sea-Scinc's, and throw away all the rest. We take the tart juices of Granates, Barberies and Citrons, to make Syrups; or to dissolve certain Minerals. We dry the rinds of Granates. We condite, dry, distil, and make Syrup of Citron-peel: the Seeds whereof serve also for many uses; as also that of Barberies, while we throw away the rest as useless: we cast away the wooden part or rind and the grains of *Cassia*; and separate the inward obscure part of *Rhubarb*; and the cups and rinds of Acorns, reserving them for other uses. We dispoil the grains of branch'd *Amonum* and *Cardomum* of their husks. We take away the bark and wooden part of *Agaric*, and the terrestrial parts of *Scammony*, *Aloes*, and several other thick Juices: as also the filth that is mix'd with several other Gums, which are comprehended under the name of Juices. We separate Gold from Silver by the *Inquart*; we purge and purifie both in a Coppel or Ashen-pot, and by several other ways. We take away the thick of Mercury, and separate the impurities of Metals, Half-metals and Metallics; as also of Salts and Sulphurs. In short, there are few things that serve either for Medicament or Nourishment, which have not some parts, which are to be spar'd.

CHAP. XIV.

Of Trituration, or Beating in a Mortar;

Trituration denotes the division of a Medicament into very small parts. The first, which better agrees with its Name, is meant of Medicaments hard and dry; the second of Medicaments moist and soft. The one and the other are serviceable in several Preparations of both *Pharmacies*. They are serviceable also for divers purposes; the chief of which are, to reduce a Medicament into a condition to be united and mix'd with others; or to make it more convenient and proper to be taken inwardly, or outwardly apply'd. Trituration of dry things is variously perform'd, according to the various nature of the Medicaments. For Woods must be saw'd, cut, bruis'd, and sometimes rasp'd, and then be put into a brass Mortar for Trituration. Horns, Hoofs, and Bones must be saw'd before they can be broken into small pieces; or else rasp'd, either to be so made use of, or else to be beaten to powder. Metals and Metallics must be fil'd for the most part, before they can be reduc'd into powder. But the *Chymists* use means much more proper to op'n and divide them into parts, without any comparison far more fine and subtle, then they can possibly be, which are divided by any way or means of *Galenic Pharmacy*. The Roots of Trees being of the same nature, must be reduc'd to powder by the same method.

The dry parts of Plants call'd Herbs, as roots, stalks, leaves, flowers, dry Fruits, Berries, Seeds, Excrefcencies both of Herbs and Trees with their barks, may be bruis'd in a Mortar, without any preceding Preparation, but onely of being cut and broken. The same thing may be done to the tender parts of Animals, being first dry'd; as the Flesh, the Blood, and the tender bones of little Animals, and some of the greater, as the bones of the hearts of Deer and Oxen. Nevertheless upon some occasions, and for some Substances, there must be recourse to Addition. As for Example; If you were to pound the Roots of *Birch-wort*, *Gentian*, or any such-like herbs that are of a clammy Substance, though they seem to be well dry'd, they will stick to the Mortar and the Pestle, unless you mix them with Almonds, or some of the cold Seeds cleans'd, or some other oylie matter, proper to divide their parts, while you pound them, without which you shall never make them fit for your use. Shavings of Ivory and Hart's horn may be triturated,

turated or beaten in a Morter among Sugar-candy alone. *Camphire* cannot be pulveris'd alone, unless you add some few drops of the Spirit of Wine, when you beat it, or some of the cold Seeds cleans'd, or a drop of some oyl. The same cold Seeds are serviceable to divide the parts of clammy Substances; among the rest also, those of the dry, but not greasie parts of Animals. They help also to reduce into powder Amber-greese, all Bitumens, and all resinous Juices dry'd, as Scammony, Benjamin, Balsom, and the like. The heat of the Brass-morter and the Pestle help to pulverise Gum-*Tragacanth* and Gum-*Arabick*, as also *Venetian-Talk*, which will however beat much better if it be expos'd a while before a flaming fire.

Many Minerals and many parts of animals cannot be reduc'd into fine powder, till they have been first burnt or calcin'd in the fire. Precious Stones, Bole-Armoniac, Earths, Amber, the Adamant, and some parts of Animals may be reduc'd into a powder scarce to be felt, which is call'd *Alkohol*, being bray'd upon *Porphyrie*, adding thereto so much Cordial-water as will bind the powder together, and keep it from waisting in beating. When they are beaten very fine, spread them upon clean Paper, and dry them in the Sun: And this is that which the *Galenic Pharmacy* calls Preparing. Medicaments of a solid substance, as wood, and several compacted and fibrous parts of Plants and Animals, must be soundly pounded in a great Iron or Brass-morter: But those Medicaments whose parts are thin and without fibers, require only a gentle bruising to reduce them to powder; as Aloe, Agaric, Myrrh, Amydon or dry'd flower of Wheat, Mastick, Scammony, and many others. In short, when several Medicaments are to be reduc'd to powder, which are appointed for one composition, the nature of their substance is to be regarded, and those things are to be bruise'd or beaten by themselves which either ought or may be so conveniently; and beat together those that will endure it. Thus you must first begin to powder those whose substance is most compact and solid, and then add the rest in order according to their hardness. Which I shall particularly demonstrate how to do, when I come to speak of the particular Preparations of powders, which are to be mix'd in Compositions.

The second sort of *Trituration*, which is only of humid matters, is ordinarily perform'd in a Marble or Porphyry-morter, or else of some other hard Stone, with a wood'n, glass, or Ivory-Pestle; though for some things they may be beaten in an Iron or Brass-morter. This sort of *Trituration* is sometimes us'd for dry Substances that will endure beating, but chiefly for moist and oylie Medicaments and Nourishments; such are Roots, Herbs, Flowers, green Fruit or newly gather'd, watry Berries, oylie Seeds and Fruits; and all the soft parts of Animals; of all which things are prepar'd sometimes Conservees, sometimes Cataplasms, Poultices and Pomatums: Sometimes they are bruise'd for Decoction, Infusion or distillation; to extract the Juice, to press out the Oyl, to extract Emulsions, to make Pastes, to be taken inwardly, or apply'd outwardly; to make Lozenges, Trochisses, or other Medicines.

CHAP. XVII.

Of Cribration, or Sifting.

Cribration, is a separation of the more fine and subtle parts of Medicaments as well dry as moist, or oylie, from the grosser. It is perform'd through Instruments proper for that purpose call'd Bolters or Sieves, which are compos'd of two wood'n circles, as it were, enchas'd the one within another, in the middle of which is nail'd and strain'd a hair-cloth, or a piece of silk if it be a Sieve, or a piece of Parchment with holes at an equal distance, if it be a Bolter. Sieves of single hair-cloth, such as we have describ'd, are serviceable not only to sift gross powders, but also the pulps of viscous and oylie Medicaments, after they have been beaten and re-beaten in the Morter. These Sieves serve also to sift Ceruſs, rubbing it first upon the extended cloth, which must be of hair, and receiving the powder upon a sheet of white Paper. Bolters serve only to sift the grosser sort of Airy-substances.

There are also certain sort of Sieves, which are call'd Covers, for the sifting of Powders Aromatick, Cephalick, Cordial, Digestive, Laxative, and other more precious sorts of Powder, or any that ought so to be finely pulveriz'd. These Cover'd-sieves are compos'd of three distinct parts, imbox'd or inserted together, every one of which is compos'd

compos'd of three wood'n-circles, the middle-moſt receiving the upper-moſt and lower-moſt like a Box-lid. The middle-moſt is that wherein the linnen-cloth or ſilk is fix'd, through which the Powders are to paſs. That part is fix'd in the lower part, which is made to receive the Powder in a ſkin, which ſerves for the bottom of it. It is alſo cover'd with the upper part, which embraces it like the Lid of a Box; and being cover'd as the under-moſt with another ſkin, hinders the Powders from waſting, while they are ſifted.

CHAP. XVIII.

Of Infuſion.

THE word *Infuſion* comprehends a great many *Galenical* and *Chymical* Preparations, which ſhall be explain'd hereafter. *Infuſion*, generally taken, is a Preparation by which entire Medicaments or their parts, being cut or bruis'd, are ſteep'd and infus'd in ſome agreeable Liquor. Sometimes it is done with fire, ſometimes without it, according to the thinneſs or ſolidity of the Subſtances which you infuſe. Which alſo ſerves for a Rule, as to the length or ſhortneſs of time neceſſary for Infuſion. The variety of Medicaments and the various intentions of the *Physicians*, oblige the *Apothecaries* to uſe various Liquors for Infuſion; as Common-water, Rain-water, Snow-water, Sea, Mineral, Roſe-water, Wine, Verjuice, Hydromel, Muſt, Vinegar, Beer, Milk, Whey, ſeveral Juices of Plants, Oyls, Broth, Diſtill'd-waters, Spirit of Wine, &c. Infuſion is made to impart the vertue of one or more Medicaments to the Liquors wherein they are infus'd. Sometimes it is alſo made to correct the evil quality of the Medicament, or elſe to augment its vertue, as alſo to unite in the ſame Liquors the different vertues of ſeveral Medicaments, infus'd together for ſome particular purpoſe. Infuſion is alſo made to ſeparate ſome particular Vertue of one Medicament, from the reſt which it may alſo have. As when by a quick Infuſion we ſeparate the purgative quality of *Rhubarb* and *Mirebalans*, to the end they may be purely aſtringent. Infuſion of *Senna* in Fountain-water, may ſerve as an Example of ſimple Infuſion, which may be done either with fire or without fire, and to manifeſt the communication of its vertue to the Water. The Infuſion of Spurge in Vinegar to take away its purgative quality, may ſerve as an Example of correction. The Infuſion of *Rhubarb* or *Senna* in the Juice of pale Roſes, may ſerve as an Example of the augmentation of their vertues. The Infuſion of ſeveral Medicaments differing in vertues, as muſt be done to make *Conſectio Hamech*, may ſerve as an Example of the union of their vertues in the Liquor. Of all which things you ſhall meet with a number of Examples in the continuance of this *Pharmacopœa*.

CHAP. XIX.

Of Humectation and Immersion.

HUMECTATION or *Moiftning*, is us'd at the beginning of Infuſion, but more often practis'd for other uſes. We moiſt'n a Medicament, to ſoft'n it when it is too dry, as when we moiſt'n Mountain *French-Spikenard*, or lay it in ſome moiſt place, that it may be more fit to be made clean: or as when we moiſt'n *Tamarinds* and *Caffia*, the better to extract the Pulp. We alſo moiſt'n certain dry Medicaments to hinder them from exhaling, while they are beat'n in the Morter, as *Agaric*, *Saunders*, *Coloquinth*, &c. as alſo to colour them; as we do by the ſame *Saunders*. We moiſt'n others while we bray them upon *Porphyrie*, to hinder the diſſipation of their more ſubtle parts, as Coral, Pearls, and Precious Stones. We moiſt'n other Medicaments, to qualify their acrimonie or their ſharpeſs, as when we moiſt'n *Coloquinth* and *Mirebalans* with ſome drops of Oyl of ſweet Almonds. We alſo moiſt'n others to aſſiſt the penetration of their vertue, as when we moiſt'n *Senna* or *Rhubarb* with ſome drops of juice of Lemmons; or as when we moiſt'n Stomachical, Cordial or Cephalick Medicines, with Oyl of Gilly-

Gilly-flowers, Cinnamon, Lavender, or the like. Others we moist'n to communicate to them some good quality, as when we moist'n a Medicament with some Distill'd-waters, or with some proper Decoction; or as when we cause it to receive the steam and vapour thereof. Irroration, Insersion and Imbibition are almost the same things with Humectation.

Immersion follows Humectation, and is either for a small time, with an intent to separate some superfluity from the Medicament, as when we soak Almonds in hot water to peel off their skins: and sometimes to take away some of their vertue; as when we steep Rhubarb a little in some Liquor to abate its purgative vertue. Or else for a longer time, to take away some evil taste from the Medicament, as when we steep green Wall-nuts in water and in several changes of water, to take away their bitterness. Or as when we steep Olives for a long time in pickle for the same purpose. Or as when we steep Quick-lime in water, to make Lime-water. Or as when we steep the peels of Citron and of many other Fruits, to hard'n them, render them transparent, and in a better condition to be condit'd.

CHAP. XX.

Of Nutrition.

Nutrition is usually done by the help of Liquors: It comes something near the nature of Humectation. It is so call'd, because it encreases the Medicament, and furnishes it with a kind of nutriture. It is perform'd two ways; either by mixing or uniting several Medicaments into one; as when we mingle by little and little and at several repetitions, Vinegar, Oyl and Litharge, and stir them a long time together in a Morter, to make the nourish'd substance of all together: or as when we do the same thing with *Saccharum Saturni*, Oyl and Vinegar, or else with the tincture of *Saturn* drawn with Vinegar mingl'd with Oyl, to make the Liniment of *Saturn*. The next way is by adding a Juice, a Water, or a Decoction to some Medicament, to nourish and augment it, or to give it some vertue; as when we add the juice of Roses or Cichory, or some hepatic or purgative decoction to Aloes to nourish it, and afterwards over a gentle fire evaporate the superfluous moisture of the same Juices, till the Aloes becomes sufficiently nourish'd and charg'd. As also when we nourish *Sarcocol* with Woman's Milk, or else as when for the Preparation of the *Spermia*, which *Crollius* so much commends, we feed *Myrrh*, *Olibanum*, Saffron and Camphire in powder with the Distill'd-water of the Spawn of Frogs, which is afterwards reduc'd into a kind of paste, and laid to dry of it self; repeating the same Nutriment and the same drying twenty or thirty times.

CHAP. XXI.

Of Dissolution; Where occasion is taken to speak of Chymical Solution.

Dissolution, in Galenic Pharmacy, succeeds Humectation. It serves to render compact and thick Substances liquid or flowing, by the addition of some Liquor. Upon occasion we dissolve Elestuaries, Opiates, Confections, Powders, Extracts, Salts, Syrups, and many other Preparations to render them potable. We also dissolve Manna, Sugar, Honey, several Gums, Tears, Rosins, in proper Liquors. We dissolve Wax and divers Emplasters in Oyls to make them soft. We dissolve Gold in *Aqua-regalis*, or in the Spirit of Salt: Silver, Copper, Mercury in *Aqua-fortis*; Pearls, Corals, Crabs Eyes, and such-like Substances, in distill'd Vinegar, Spirit of Nitre, or some such acid Juice. *Mars* or Iron is dissolv'd in Water by the help of *Tartar*, as also in *Aqua-fortis* and corrosive Spirits. The resinie part of Scammonie, Jalap, Agaric and Turbith, &c. Amber-greese, Amber, Gum-lack, are dissolv'd in Spirit of Wine. Gum-Saundarach in the true Oyl of Asps distill'd. In short, several other Medicaments may

may be dissolv'd in Liquors which have some correspondency with their substance.

Solution, in *Chymical Pharmacy*, is the division and dissolution of all the substances that compose a mixt Body. It is the foundation of all *Chymistrie*, and the encouragement to a great number of noble Preparations which that Art puts in practice. Under Dissolution, you may compute several other Preparations, which may more aptly be plac'd under the title of Coction.

CHAP. XXII.

Of Making boyl, or Calefaction.

Calefaction, is the beginning of all operations which are perfected by the means of heat. It differs from *Coction* in this, That what-ever is boyl'd has been well heated, but what-ever is warm'd has not been boyl'd. Nevertheless sometimes we are put to heat again those things which have been boyl'd. We warm Infusions, Tinctures, Decoctions, when they are cold, to the end they may be the better strain'd. We heat, Baths and Half-baths, when we have occasion for them. We warm Oyls, Oyntments, Fomentations, Epithems, Cataplasms, and Emplasters when we apply them. We warm Powder'd-Nutmegs, Line-seed, Annise-seed; and many other such Seeds, when we go about to press out the Oyl. We heat water luke-warm to provoke vomiting. We warm Iron and Brass-morters and Pestles, sometimes to melt certain Gums, as *Taccamahacca*, Mastic, Ammoniac, Galbanum, and the like: sometimes to pulverize others, as *Tragacanth* and *Arabick*; sometimes to pulverize Minerals, as Talk: or to dissipate the superfluous moisture of some Medicaments, and to make them fit to be pulveriz'd, as Saffron, Tabac, &c. or else to consume some adventitious moisture of Medicaments compos'd, and to restore them their consistencie and dryness; as in Extracts, Salts, and many other Preparations. We warm infus'd Dates, *Cassia*, and Tamarinds, the better to draw out the pulp; we warm Broth to dissolve *Magma*, though it may be also dissolv'd in cold Liquors. We heat the Vessel of Iron in the form of a horn, when we pour the Antimony in Fusion to separate it from the *Regulus* or Tinniedross. We heat our earth'n or glass-Vessels for fear they should break, when we pour scalding Liquors into them. We heat the neck of the Limbeck, especially in Winter, which contains the Antimony and the Sublimate, in the distillation of Oyl of Antimony, to melt it when it is congeal'd there, and to make it drop into the Receiver. We heat Wax, Rosin, Suet and Tallows to melt them. We heat Sea-onions, Purslane, Burrage and Bugloss, and many other Plants, to extract the Juice.

CHAP. XXIII.

Of Insolation, or Exposing to the Sun: And of the heat of Dung.

Insolation is the warming of Substances by exposing them to the heat of the Sun. We usually make use of it for the macerating of liquid Conserves, for the macerating of Flowers, or Herbs to be put into Oyls or Fats; for Tinctures, Balsoms, to dry the parts of Plants or Animals, which we intend to preserve or use; to dry Salts; to evaporate Extracts, Juices and Liquors, or to purifie them; to make Wine eager; to assist the Fermentation of *Hydromel*; to separate the black rind of Pepper, as they do in the *Indies*, when they have water'd the ground with salt-water to make the Pepper white: to dry Figs, Peaches, Prunes, and many other Fruits, in hot Countries. It is also serviceable for many other uses.

Horse-Dung being half putrify'd and well pil'd up, affords a heat more or less, according to its quantity, and according as the Substances are either deeper or shallower buried. For the heat may be greater then the hand of a Man shall be able to endure. There is no heat which can be better regulated, or be brought to that equality, as that of Dung, or which approaches nearer to the Natural heat. It is proper to digest liquid matters, or to advance the Fermentation of those which have a natural disposition

tion to it. Thereby may be made a circulation of divers Substances; thereby may Tinctures be drawn forth, Eggs may be hatch'd, and several Distillations made.

CHAP. XXIV.

Of Coction and Maturation.

THE Ancients and also the Moderns have defin'd *Coction* to be an alteration of a thing which ought to be boyl'd. Nevertheless I do not find this definition to be very exact, if it be not tak'n in a very general sense, which agrees indifferently with all sorts of Alterations. Since the Alteration may be observ'd in all Preparations which are made with and without Coction, and that moreover the diversity of those which are made with Coction is so great, that it is a hard thing to find a definition precise enough to agree with all in particular. So that without troubling my self to define it more exactly, I believe it will be enough for me to say, in dividing it, That there are several sorts of Coctions, and several degrees of every sort, according to the various Substances of the Medicaments, and the various Intentions of him that prepares them. The Ancients have set down some sorts of Coction, and among the rest Maturation, Elixation, Frying, Assation, Torrefaction, and Ustion. But in regard that besides all these, there are a great number of others which are to be known and practis'd, especially in *Chymical Pharmacy*, I thought it requisite to discourse of every one in particular, as shall be seen hereafter.

Maturation is a kind of Coction, sometimes dry and sometimes moist. For we may roast either before the fire or upon the hot Cinders green Fruits, in some measure to perfect their maturity, and make them fit to be eat'n. They may be also bak'd in an Oven, or boyl'd upon the fire in Water, in Must, in Honey, in any Juice, or in any other Liquor. There are also some Fruits, which having been gather'd green, rip'n in keeping; as Medlars, which are for that reason spread upon straw.

CHAP. XXV.

Of Fermentation.

FERMENTATION ought to be accounted a kind of Coction, being a certain Ebullition which arises from the confus'd mixture of two Substances, in appearance contrary in their action; which the *Chymists* call *Acid* and *Alkali*. This is an Operation sometimes natural, and sometimes artificial, which happens to liquid or at least to moist Substances, either by the help of some external heat, or natural heat which is rous'd in the matter it self, by the conflict of Substances which bught to be fermented, and which thereby detect an *Acid*; which though but small in quantity at first, becomes however powerful enough to agitate the volatile parts of the whole matter, to unite with them, and dispose them to disengage themselves from the Terrestrial and gross parts that incumber them, and to reject and throw off the one part in scum by Ebullition, and the other in Sediment by a kind of precipitation, when the matter is liquid. It becomes also sufficiently prevalent to put them into a condition of being preserv'd for some time without those *Terrestrieties* or earthie parts; or else to be made more pure by the means of distillation, which separates and raises the Spirits above the heavy and unprofitable Flegm, which incumber'd them before; and to become at length perfectly pure by rectification.

We have not any subject that more apparently clears this Operation than the Juice of the Grape: which deserves to be consider'd, in regard of the several changes that happ'n to it through Fermentation. Experience teaches us that it is impossible to separate its pure and volatile parts if they have not endur'd Fermentation. Which may be observ'd in Burnt-wine. For if we take the Juice of Grapes, and let it boyl in a Kettle to the consumption of the third part, which is the usual Rule, there will arise nothing but the insipid and unprofitable Flegm. And though in the boyling it be se-

parated from its earthiness, partly in the scum, partly in the terrestrial matter that sticks to the sides and bottom of the Kettle like Lees; the subtle and volatile parts keep still united with the fix'd and tartareous Salt of the same Juice, and the remainder of the Flegm; nor can they be separated but by Fermentation, which afterwards happ'ns of it self, without the concurrence of any external heat; if you put the same Juice in some measure clarify'd, into a proportionable Vessel, as you would do ordinary new Wine, and leave it standing six weeks or two months. For in that time the *Acid*, that lay hid in the proper Substance of the Juice, assisted by the nitrous parts of the Air which it has insensibly attracted, cuts and separates the thick parts of the Burnt-wine from the pure, throwing off the first by the Ebullition which it raises, partly in froth through the bung-hole of the Vessel, and partly to the sides and bottom; and uniting it self to the latter, by vertue of a particular inclination, not being able however to separate the Flegm which remains, and which will very hardly forsake it. When the Burnt-wine has thus endur'd Fermentation, and that it is well purg'd, if it be put into a Vessel to still, it fails not to send its Spirit first, and in greater abundance then the same quantity of ordinary Wine would do, which appears to have that third part of Flegm which the Burnt-wine had lost in burning. And if you continue the Distillation, after the Spirit is ascended, the Flegm which remain'd in the Burnt-wine shall rise also like that of ordinary Wine when distill'd in the same manner.

This ordinary Wine is more easie to prepare then Burnt-wine; for it requires no external fire, but only that which is excited by the parts of which it is compos'd, which raise the Fermentation in it; which usually begins in the Tub, where the Juice remains mingl'd with the grounds and squeezings of the Skins for some days; and ends afterwards in the Vessels, when the settlings are sunk to the bottom of the Juice. There may be also a Fermentation of the Juice of Grapes in the Vessel, though the grounds be not mingl'd with the Juice; as they never do that put up white and pale Wines. Upon which subject give me leave to speak my thoughts, which are these, That Wine being compos'd of a *Sulphuric* and *Acid Tartareous* Substance, mix'd with some Flegm, somewhat of fix'd Salt, and some earthy parts, is expos'd to several changes, caus'd by the disuniting of its Substances, or by the predominancy of the one above the other. Whence it comes to pass that much Rain before or during Vintage-time, makes the Wines to abound in Flegm, and consequently subject to corrupt. Wine is also subject to corruption and to become fat and oylie, when the volatile Sulphur surpassees the Tartareous Acid. Which is clearly demonstrated in this, that if you put some Pints of good Verjuice into a Cask of Wine ready to turn greasie, and in some measure already become fat, and mingle them together, the Wine will come again to it self. We may observe also that green Wines, that is to say, those Wines which abound in *Acid*, are not so subject to corrupt, as those which want that *Acid*: and we find that this *Acid* at the latter end of the year turns to Strength.

On the other side we may well judge that the corruption which happ'ns to Wine through the want of the *Acid*, does not extinguish the volatile sulphurous part of the Wine, seeing that those Wines afford almost as much combustible Spirit as those which are not spoil'd.

I am of opinion also that the true and natural alteration of Wine into Vinegar proceeds from no other cause, but only for that the *Acid* is increas'd and exceeds the volatile; or else because the volatile Spirits being exhal'd, the *Acid* manifests it self more openly, and more sensibly fixes its impression upon the tongue and the palate. Which happ'ns to those Wines which naturally abound in Tartar and by consequence in *Acid*, as do those of *Languedoc*, especially when they leave their Casks open, and that the Wines can attract the nitrous parts of the air, to encrease those Acids that make up one part of their Composition.

There is another natural Fermentation which happ'ns to Substances mix'd of *Acids* and *Volatiles*, which are of a soft, but not liquid consistency: which comes to pass by the conjunction of the *Acids* with the *Alkali's*. As we observe in Treacle and in several other Compositions; upon which I will not enlarge, for fear of making the Chapter tedious.

Artificial Fermentation is done by adding *Acids* to the Substances which you would have fermented. As when we put Leven to Dough, or Yest to certain Plants or bruis'd Berries in luke-warm Water, to hast'n the Fermentation, and afterwards to draw forth the Spirits and Volatil-oils: as in the Fermentation of Cresses, Scurvy-grass, the lesser Centaury, Juniper-Berries, and of many other parts of Plants. As for the leavening of Bread, that Fermentation cannot actually separate the terrestrial parts into
froth,

froth, or precipitate them to the bottom, as in liquid Substances, for it only op'ns and dilates the Substances; more strictly uniting the acid with the volatile, so that they may be in a condition to receive their last Fermentation in the Stomach, and to the end they may be so well subtiliz'd, that they may with more ease be convey'd to all the parts of the Body for nourishment, leaving the gross and terrestrial parts to be thrown off as real excrements.

CHAP. XXVI.

Of Digestion, and Maceration.

Digestion and Maceration are almost the same thing. They require a long time and a moderate heat for their operation. Scorpions are digested or macerated whole in Oyl of bitter Almonds, to the end that by a little and a little they may communicate their vertue to them. New Roses bray'd with an addition of Salt are put into a Vessel exactly stoppt, and being left for some months to macerate in a Cellar, there is then an odoriferous Water, Spirit and Oyl drawn from them. The same Roses are a long time laid to macerate, sometimes in Oyl, and sometimes in Hogs-grease, for the making of Oyl, and *Unguentum Rosatum*. Slic'd Dates are oft'n digested in Hydromel, and the pulp drawn forth to make *Electuarium Diaphanicon*. The heads of Poppies are oft'n digested in Water to make them soft, a little before their decoction for Syrup. Lead slightly calcin'd, Minium, Ceruse and Litharge are digested in distill'd Vinegar, there to be dissolv'd by little and little, either to preserve the dissolution, or to make a Magisterie, or else that which they call improperly *Salt of Saturn*. Pearls and Corals are also digested in the same Vinegar distill'd, in the Spirit of Nitre or in acid Juices, to dissolve them sometimes for the making of Syrups, sometimes Magisteries, sometimes Sales, though improperly so call'd, in regard they are no more then the Salts of Vinegar distill'd. The filings of Steel are laid to digest in Spirit of Vitriol, to make *Vitriol of Mars*. The Spirit of Wine and the Spirit of Vitriol being mingl'd together by equal weight, are put to digest in an Iron-Skillet, there to be incorporated and reduc'd to a whitish Substance, which is call'd *Salt of Mars*. Jalap, Scammony, Agaric, &c. are laid to digest in Spirit of Wine, there to dissolve the resinie part, and to separate the terrestrial. Opium is laid to digest first in Water, there to dissolve the watry part, and then in Spirit of Wine, there to dissolve the resinie part which cannot be dissolv'd in water. Several other Substances are also digested in divers other Liquors; the enumeration of which would tire the Reader.

CHAP. XXVII.

Of Tincture, and Circulation.

Tincture usually calls Digestion to its assistance. It is made use of to the same purpose as Infusion, and chiefly to impart to some Liquor the Vertue or the principal Substance of some Medicament. It is call'd *Tincture*, because the Liquor generally becomes colour'd in the Operation. The pure and resinie part of Benjamin is dissolv'd in Spirit of Wine, which gives it a light purple colour. Coloquint cleans'd from its grains, cut and digested in Spirit of Wine, receives a yellow tincture, which *Martin Rouland* calls *The gilded Spirit of Life*. Aloes, Myrrh, and Saffron pulveriz'd and digested in Spirit of Wine, yield a swarthy-red tincture to make the *Elixir proprietas* of *Paracelsus*. The Rose, the Violet, Rhubarb, Senna, Cassia, and many other Medicaments impart their tincture to watry Liquors, to which the addition of some Spirit or acid Juice, or some fix'd Salt, may very much conduce, as well to height'n the colour of the Tincture, as to make them more strong of the vertue of those Substances which are steep'd therein.

Circulation cannot operate without Digestion, no more then *Tincture*. It is us'd for Liquors impregnated with the Substance of Medicaments; or for those that have sub-

fraternal Medicaments soaking in them. It is done by putting the Liquors in a Vessel so circulate, being all of one piece and close stopp'd at the top: or else of two pieces, that is, of two Vessels fix'd one upon another, and well-luted together, of which the lower most must contain the Liquor. The Circulation is made by a fire of Lamps, or a bed of cinders or sand moderately hot, or in Dung, or in the Sun. It requires most commonly a continu'd heat for some days, and sometimes prolong'd to the number of weeks and months. By Circulation the most subtile matter ascends to the top of the Vessel, and not finding any out-let, is constrain'd to fall down again, and rejoyne with the Substance at the bottom of the Vessel, from whence it was rais'd. And thus continuing to ascend and descend in the Vessel, it makes a kind of Circulation, the Name whereof the Operation bears; and by the several penetrations and agitations of the Spirit full with the grosser parts, the first become more thin and in a better condition to act, when they are separated from the latter. This Operation is principally in use in *Chymical Pharmacy*. It wholly disposes the Liquors to the separation of their pure parts from the impure, ripening and perfecting their active principles, and rendering them fit to be made volatile, and to be united afterwards to other purify'd Substances, if there be occasion.

CHAP. XXVIII.

Of Cohobation.

Cohobation is a repeated Sprinkling of the distill'd Liquor upon the Substance from whence it was drawn, to the end the said matter may be distill'd again. This Sprinkling is repeated seldomer or oftner, according to the diversity of Substances which are distill'd; and as the purpose of the Artist requires. It is us'd most frequently us'd to open and dissolve the parts of mixt Bodies, which you desire to have distill'd, to which the repeated Sprinkling of the Spirits already drawn forth very much conduces. This Operation may in some measure be thought to do the office of Circulation, by yielding at length a Liquor containing the most essential part of the mixt Body. Cohobation is chiefly us'd in the distillation of spirital Aromatic waters, and the distillation of their Oils, to have them more pure and in greater quantity.

CHAP. XXIX.

Of Elixation.

Elixation is the boyl'ing of a Medicament in some Liquor different from it, according to the diversity of the Medicament, and the various intentions of the Artist. It is to endure a longer or lesser time, as the Medicaments are more or less solid. Generally Fountain or River-water is more us'd in Elixation: but sometimes Mineral waters, Lyes, Rain-water, Dew, Snow and Sea-water may be us'd as well. Milk, Whey, Hydromel, Wine, Vinegar, Beer, divers Juices of Plants, Distill'd waters, Oils, Fats, as also the Urines of several Animals, are many times more properly serviceable.

The most usual intent of Elixation is to impart the vertue of the Medicaments to the Liquors. As many times it happen's in several Decoctions made for Apozemes, Potions, Clysters, Fomentations, Baths, &c. as also for Syrups, Electuaries, Oils, Ointments, &c. Sometimes it serves to take away the Crudity of the parts of Animals or Plants, to soft'n them, and not only to make the things boyl'd, but the Broth itself useful: as in the Elixation of Flesh, Roots, Herbs, and Fruits which we eat. It is useful also to take away from any Medicament or Aliment any ill taste, or ill quality, as from Colic-flowers and Champignons which are boyl'd in two Waters, the first of which is thrown away, and with it the hurtful Juice of the Colic-flowers and Mushrooms. It also separates the earthy and gross parts of Medicaments: as in the Elixation of Salts, Sugar, and Honey, to take off the scum. It serves also for the preparation

vation of Medicaments, as Syrups, Honeys, and Robbes. Upon Elixation attend the following Operations.

CHAP. XXX.

Of Ebullition, Despumation, Streining, and Filtration.

Ebullition (which is a gentle seething to bubbling) is oft'n-times necessary at the end of Infusions; almost at all times in Elixations, and many times in Purifications. We boyl Decoctions of the parts of Plants and Animals, Syrups, Uagments, Electuaries, and an infinite sort of other Compositions; some more, some less.

Despumation, is practis'd in several Elixations, especially in that of Victuals, Sugars and Honeys. However Boyling or Ebullition always precedes; which separates and raises above the Liquor the gross, terrestrial and viscous superfluities like a froth.

Colature or Straining, is usually next in order to Ebullition and Despumation. But it may be done upon other occasions and at other times, like Filtration. They are both useful in each *Pharmacy*, in the preparation of an infinite sort of liquid matters, the dregs whereof are dispos'd to be separated, either by Rest, Digestion, Circulation, Fermentation or otherwise. It is useful also in the separation of filth and other impurities, which are apt to be mix'd with the Liquors. It is also useful to separate the moisture of several Substances design'd to be dry'd. At also separates the watrie from the oylie Substances.

Liquors are strain'd through hair, through linnen, through woollen, sometimes through a loose cloth, and sometimes through a Bag which we call *Hippocrates Breeches*. Liquors are filter'd variously: for sometimes we make use of Cotton-weeks, or Flax, or else of little pieces of white cloth as long as a Man's hand, and two or three fingers broad, which must be first wet in ordinary Water; then having wrung the moisture out, and leaning the Vessel that contains the Liquor upon one side, you must put in a third part of the length of your cloth into the Liquor you intend to filter, the other part hanging over the Vessel, so that the clearer part of the Liquor falls into another Vessel, which is plac'd below the former to receive the Liquor, if it be of any consequence. For by this means the Liquor distils through the cotton or cloth, and rids the Substances of the greatest part of their moisture, if it be superfluous; or else the oyls that swim at the top are separated from the moisture that bears them, provided you take care from time to time to stoop the Vessel as it empties. This Filtration is oft'n made use of, for the separation of Waters us'd in the lotion of Minerals. Several Liquors are also filter'd through a sheet of brown Paper, extended upon some clean linnen, or else made up like a horn, and put into a glass or white Iron-Tunnel. Sometimes also Liquors are filter'd through a heap of beat'n glass, plac'd below a glass-Tunnel. And thus Spirits of Vitriol, Nitre, Sales, Sulphur, &c. are filter'd, when they are charg'd with any earthiness, which sometimes mixes with them in luting and unluting the Vessels. This sort of Filtration is absolutely necessary for these corrosive Spirits: for they eat and penetrate paper, cloth, or cotton too soon. Filtration through brown Paper in a glass-Tunnel, is us'd for watrie Substances to separate them from the oylie, which not being able to pass through the Paper, remain in the filter, and are drawn forth and separated by putting the bottom of the Tunnel in the neck of some proper Bottle, and piercing the end of the Paper with a silver or steel Bodkin, or else with a Sewer. And these are the most usual ways of filtering and straining.

CHAP. XXXI.

Of Clarifying, and Pressing forth.

Clarification happ'ns of it self oft-times to some Liquors; only by standing still, especially after Digestion, Circulation, and Fermentation: But the most common and quickest way of Clarification, especially in *Galenic Pharmacy*, is made by Ebullition,

tion, Despumation, Streining or Filtration. Sometimes the whites of Eggs are also made use of; and then they are stirr'd and beat'n among the liquid matters, which are to be clarify'd, before you make them boyl; especially among Sugar, Honey, and Gellies. To which we add white Wine to clarify them well. Sometimes we pour a little Vinegar, juice of Lemmons, Barberies, Verjuice, or some drops of Spirit of Vi-triol, or Sulphur; or else Creme of Tartar, Mineral-Chrystal, or Nitre purify'd, to make a kind of Precipitation, or at least a Separation of the gross matters from the pure liquide, and so to dispose of the first as to remain in the Filter.

Expression or Pressing forth sometimes precedes Clarification, especially in Decoctions, when they are to be separated from their grounds. There is a greater or lesser strength to be us'd, according to the intrinsecal worth of the Medicament, and the Nature of the Substances either thick or thin. The Expression of the Decoction of the parts of Plants in any Liquor, is generally the most easie and slightest of all, unless you meet with Laxatives or Aromatics whose vertue is very considerable. The Pressing of Plants for the Juice, must be stronger; and some Plants, especially those that are of a viscous nature, ought to be heated before. The same method is to be observ'd very near in the pressing of watry Fruits: the expression of infus'd Oyls, Unguents and watry Gums must be with an indifferent strength. The expression of oylie Fruits and Seeds, as Almonds, common Wall-nuts, Filberds, Nutmegs, Benne, the great cold Seeds, those of Annise, Pop-pies, &c. requires an extraordinary strength.

CHAP. XXXII.

Of Aromatization, and Colouring.

Aromatization and Colouring oft'n meet with Filtration and Clarification. They are also us'd in several other Preparations. Aromatization is useful as well to augment the vertue of the Medicaments, as also to render them more pleasing to the scent and taste. We mix in Powders Substantial-Aromatics, as Mace, Cinnamon, Cloves, Saffron, Musk; Ambergreece, and several others. They are also mix'd in Opiates, in Electuaries, Confections, Pills, Trochiskes; as also in Oyntments, and Em-plasters. They are also mix'd in Infusions, Tinctures, Elixirs; as also in Decoctions and Syrups. But this must be understood by the way, That the principal parts of Aro-matics, being thin and volatile, cannot long endure the fire without dissipating those parts. So that they are not to be mix'd till last of all; and great care must be tak'n to cover the Vessels at the same time, to prevent the dissipation. To which the An-cients having a great regard, were accusom'd to put their Cordial Aromatic Powders into a Cullender or Wooll'n-bag, through which they strein'd their Apozems or De-coctions, when they intended to aromatize them: being of that opinion, That the heat of the Decoction was sufficient to attract and retain the vertue as it pass'd through, and that there was no need of a stronger heat. But now we have ways more proper and convenient to aromatize all sorts of Remedies, in regard we can put into them the Oyls of several Aromatics, which *Chymistrie* teaches us to distil, and which contain the true sulphuric, aromatic and essential part of the Substance. These Oyls incor-porated in drops with forty or fifty times the weight of fine powder'd Sugar, are in a condition to be united and effectually mix'd in all sorts of Liquors and Medicines, and to render them more aromatical, pleasing, and of greater strength, then the Sub-stance of Aromatics us'd as the Ancients were wont to do, according to the Precepts of *Galenic Pharmacy*.

The Colouring of Medicaments is Natural or Artificial. The Natural is two-fold. For either it is such as Nature produces, as White in Snow or Milk, Red in Blood, Yellow in Gold, Sad colour in Lead or Antimony, &c. or such as length of time, or some other accident alters; as the whiteness of the Hair through Age, Paleness of the Face through Sickness. Artificial happens either through Fermentation, as to divers Juices; or by Digestion, as to Tinctures of Tartar and Coral; or by Agitation, as in the white colours of Pomatums, or *Galen's* Sear-cloth; or by the mixture of different Sub-stances: of which some may change or height'n the colour of the Medicament by its acidity, as divers Spirits do; others dye with their own colour, as red Sanders, Dra-gon's blood, Indigo, Verdigreese, Cochenille, Saffron, and many other things. Or
by

by Washing and exposing to the Sun, and the Air: as the white colour of Wax, Oyl of Eggs, and several other things. Or by Coction, or Calcination, as it happ'ns to Mercury, Lead and Antimony. In short, the change of colour may happ'n to Medicaments a thousand ways, fore-seen, and not fore-seen, which it would be too tedious to relate.

CHAP. XXXIII.

Of Frying, Assation or Roasting, Torrefaction.

F*rixion* or Frying, is usually done in a Frying-pan, with the addition of some Liquors, especially Oyl or Suet. It is done with less Liquor then ordinary boyling; and upon a quick fire for Meat; but with very little liquor and over a moderate fire for Medicaments, to prevent dissipation of their good parts. Eggs are first boyl'd in Water, and when they are hard, the yolkes are tak'n out, and fry'd over a moderate fire, till their oyl begins to appear in the Frying-pan; then pour upon them a little Spirit of Wine, and immediately put them into a coarse Linnen-bag, and press them strongly to get out the Oyl. Mirobals in powder must be gently fry'd, pouring upon them a little Oyl of sweet Almonds to temper their asperity.

Assation, is the Coction of Food or Medicaments in their proper juice, without the addition of any moisture or basting extraordinary. Thus Meat is roasted upon a Spit, or upon a Grid-iron. We roast Water-nuts, or Saligots, Chest-nuts, Apples, Pears, and many other Fruits and Roots in their own juice, either upon the coals before the fire, or otherwise. We bake in the Oven Squills, Onions, red Parsnips, and several other Roots and Fruits without the addition of any moisture. We also bake Meat in the Oven, and dry the parts of Animals as the Blood, the Secondine, &c. and some Animals whole, as Moles, &c. We roast Coffee upon a Spit, in a Tin-box; all which several wayes may pass under the Name of Assation.

Torrefaction is an abatement of Assation; it is us'd in dry Medicaments that abound in strength. It is chiefly us'd for Rhubarb and Mirobals beat'n to powder, and spread upon a silver-Plate or a thin piece of iron, set upon a Chaffing-dish. They may be also torrefy'd over a moderate fire, stirring them oft'n with a Spatula or little slice, till the powder begins to look of a darkish colour; which is a sign that the purgative Faculty is quite gone, and that the astringent only remains.

CHAP. XXXIV.

Of Ustion, Cineration, and Extinction.

U*stion* or Burning has its differences and degrees, according to the diversity of the Substance of the Medicaments, and the various purposes of the Artist. The Ancients made use of this Preparation for Animals, Plants and Minerals. They burnt the Horns, the Hoofs, the Bones, the Flesh, the Feathers, the Hair and all parts, not considering, that what-ever Animals have of essential in all their Bodies, consists in their volatile salt and oyl, which by Ustion are dissipated and exhal'd. I desire the Reader to take the pains to view my Preparation of Vipers, and to examine the reasons which I have to condemn in that particular the proceedings of the Ancients, as also the burning of Harts-horn and Ivory; an error which some to this day can hardly avoid committing. Indeed we burn to good purpose several sorts of Wood, as well to warm us, as to dress our Victuals, and draw out their salts: We also burn several Plants and their parts to extract the salt: But neither the salt of the Wood nor of the Plants can be drawn out by bare Ustion, which only reduces them to coals; so that it is absolutely necessary to reduce that coal into ashes, to draw forth the Salt. And this is call'd Cineration, which is done by a long and continu'd Ustion, especially of Wood or other parts of Plants. It being certain, that in the change which Ustion makes of Wood into coal, that the flegm, spirit and oyl of the Wood are totally dissipated, if the Wood be well burnt; and that the little moisture which is drawn forth by the distillations of ordinary coals, is only borrowed from the Earth, or from the Substances wherewith the *Cilliers* extinguish their coals; and

and that the hurtful vapours which ascend from the coals while they burn, proceed from the nitrous and sulphuric parts, and from those other Substances of which they are compos'd. You may know the nitrous and sulphuric parts, which that moisture contains, by the precipitation which may be made thereof, if you throw Spirit of Vitriol upon it. We may also alledge, That the hurtful vapours that proceed from ordinary coals, proceed from something else besides its own proper Substance; seeing that the coals of a fire that go out of themselves in the open air, is not capable of doing any harm when it is lighted again; nor need we to wonder at it, in regard those coals contain nothing considerable; but the terrestrial and salt part which remains in the cinders, after the coal is consum'd. It is also observable, that after you have drawn through a Retort the spirit and oyl of Woods by a long-contin'd fire, and violent too at the end, you shall find in the Retort the Wood converted into coal, by distillation depriv'd of all that flegm, spirit and oyl which it contain'd; and that though you keep a violent fire to the same coals in the Retort, provided with a Receiver very well luted, they will never turn to cinders, but preserve their shape of coals: Nor can they be reduc'd to cinders without the help of the Air, which assists the activity of the fire, dissipates that part of the coal, to which *Vanhelmont* gives the Name of *Gas*, makes the coal to lose its shape, and reduces it to cinders.

You shall find in the latter part of this *Pharmacopœa*, the way how to separate the Salt matter from the Terrestrial, which are the two Principles of which cinders are compos'd, and which remain in the Coal after the separation of the other Principles.

The strong Ustion of Minerals, ought to be refer'd to Calcination. Ustion in a lesser degree, which is not at all destructive, may in some measure be comprehended under it, though to speak properly, it onely ought to be call'd a Heating red-hot; as for Example we heat *Tutia* red-hot three times in the fire in a Crucible, and quench it as many times in Rose-water, to repress its acrimonie; we also heat red-hot in the fire a square piece of Steel, and quench it as often in water, to make it astringent.

Extinction or Quenching, is practis'd upon Minerals that have been heated red-hot in the fire, and are afterwards quench'd in certain Liquors. This Quenching or Extinction is made use of to abate their acrimonie, as I have said of *Tutia*; or to impart their vertue to the Liquor wherein they are quench'd; as that of Steel to Water; of Bricks to Oyl, to make Philosophers Oyl: It serves also to make certain Minerals brittle, as when we quench red-hot Flints in Water. We call, but improperly, by the name of Extinction, that of Flowing Mercury, when we take away the fluidness thereof, by the assistance of Turpentine, or any other viscous matter. But this Extinction is not to be refer'd to those of which I have already spok'n, which must be preceded by Ignition or heating in the fire the Substances you intend to quench.

CHAP. XXXV.

Of Calcination.

Calcination is the turning of a Medicament into Lime, by the help of a violent fire; it is of great use in *Chymical Pharmacy*, and chiefly for Minerals, whose substance is more solid than that of Plants and Animals. Calcination is divided into Actual and Potential: Actual Calcination is perform'd by the Fire; Potential by corrosive Spirits. Minerals require a less or bigger fire, according to the diversity of their substances, and according to the various purposes of the Artist. Calcination of Lead into grey powder inclining to yellow, requires much less fire than other Calcinations of that Metal. The Calcination of Oyster-shells is much sooner done than that of Lime, which serves for building. There is less fire requir'd to calcine Antimony into a grey powder, then to calcine it into a white powder, which is call'd Ceruse of Antimony, or Antimony-diaphoretic; or then is requir'd to convert it into Saffron, Regulus, or Glass. The Actual Calcination of Minerals, is perform'd sometimes without addition, as the simple Calcination of Lead, Antimony and Steel, &c. sometimes by the addition of Sulphur, Nitre and Tartar, &c. The Potential Calcination of Metals, is also call'd Immerfive. It is made by the means of corrosive Spirits, which penetrate and dissolve them. So Gold is dissolv'd in *Aqua-Regalis*, or by Spirit of Salt well purg'd from its flegm. Silver, Copper, Mercury, Saturn, Mars, &c. by the Spirit of Nitre, or
Aqua-

Aqua-fortis, or by other corroding Spirits; and so are all the rest. It is call'd Immerfive, because the Minerals are steep'd in the corroding Liquors, to the end they may lie in soak there till they are cak'd.

CHAP. XXXVI.

Of Amalgamation, Fumigation, Cementation, Stratification.

A *Malgamation*, is a Potential Calcination, which is made of Gold and Silver, by the means of Quick-silver, which being mingl'd either with the one or the other of these Metals when it is melted, separates their parts, and for a time so effectually mixes it self with them, that the whole becomes an unctuous paste that may be extended upon the hand. This paste being afterwards put into a Crucible and set upon the fire, loses its shape and consistency; for when the Mercury has forsak'n those perfect Metals by evaporation, they appear at the bottom of the Crucible, like Lime, much more fine then it could possibly have been made by any other Operation.

Fumigation, is also a Potential Calcination, by which the Mercurie put upon the fire in a Crucible, the mouth whereof must be somewhat streight, corrodes and reduces into Lime the thin plates, which hang over it to receive the vapour of the Mercury. Saturn in plates hung in that manner, so that it may receive the vapours of Vinegar set upon the fire, will be also corroded by that means, and the superficies thereof converted into a white Lime, which is the true Ceruse. This Fumigation is call'd Evaporating-calcination. Fumigation made by the means of Sulphur kindl'd, is made use of to abate the purgative Faculty of Scammony, by the penetration of the acid of the same Sulphur into all the parts of the Substance of the same Scammony, and by the change which it produces by the uniting it self to it. But this is no Calcinating-fumigation, like those of Mercury and Vinegar. I let alone those Fumigations which are rais'd from Aromatics, which are onely exhalations of the more odorous parts of those sorts of Substances, which never change the nature of those that receive them, no more then of their form, but only leave the scent of their odours behind them.

Cementation, is yet another sort of Calcination, whereby the imperfect Metals, which are mix'd with Gold and Silver, extended upon small and very thin Plates, are calcin'd and destroy'd, so that the perfect Metals become rid of them and absolutely pure. It is call'd Cementation, because of the Cement in powder, with which the thin Plates are strow'd all over, by means of the Stratification which is us'd in the Crucible, that is afterwards cover'd and luted extraordinary close; and then put in a Gradual wheel-fire for some hours, till the perfect metals are melted, which is the last period of Cementation.

Stratification, or the laying of things in rows or beds, is done by covering the bottom of the Crucible with a powder for Cementation, upon which are laid certain thin Plates of Gold or Silver, which must be cover'd again with the powder; then lay other thin Plates upon that powder, and then more powder upon those Plates, continuing so to do alternatively, and ending with the powder with which you began; then cover the Crucible and lute it exactly, and put it in the wheel-fire, as has been said already in Cementation. Stratification is also made use of upon several other occasions, where Cementation is not necessary.

CHAP. XXXVII.

Of Fusion, Granulation, Projection, Detonation and Fulmination.

F *U* *Fusion* belongs only to Metals, and Mineral Substances, which are put into a Crucible, and expos'd to a violent fire, till the Substance is melted. The Salts of Plants are also melted in the same fire to vitrifie them.

Granulation cannot be done without Fusion; and it is consequent to it. It is chiefly practis'd upon Gold or Silver melted together or separately. We softly pour these

Metals into cold water when they are well melted, for then you find them in grains at the bottom of the Vessel. You may also lay some swigs of a Broom upon the top of the water, the better to divide the melted Metal, and to make the grains lesser: There are others that for the same purpose, will run them through Paper pierc'd full of holes with a Bodkin, and rubb'd with Orpiment.

Projection is made after the following manner. You must place a Crucible, or an Aludel upon a round of bak'd earth about two fingers thick, and sufficiently broad, which the *Chymists* call *A Culotte*, to set the Crucible or Aludel upon. This Round must be set with the bottom downwards upon the middle-grate of a Wind-furnace, kindling a Charcoal-fire round about the Round of bak'd earth, and the Crucible or Aludel. The Crucible being well fortify'd with its cover, and the Aludel with its stopper. The fire must be continu'd till the Crucible or Vessel be red-hot; at what time you must throw into either an ounce of that Substance which you intend to project, making use for that purpose of a Ladle, or Iron or Copper Spatula with a long handle, able to contain as much as you are to throw in at a time, but not bigger then the cover of the Crucible or the Aludel. At the same time you must also cover the Crucible, or stop the Aludel; and when Detonation is pass'd, you may op'n them again, and throw in as much new matter as at the first time, then cover them again, and continue the same Projection till all the matter be projected, or that the Vessels are able to contain no more.

Detonation usually accompanies Projection. It is advanc'd by the Nitre, which is the most powerful agent in matters to be projected. It is also succeeded by Fusion, to which the force of the fire, and the activity of the Salt-Peter compel the Substances. The most familiar happ'ns in the Preparation of Diaphoretic-Antimony, made by Antimony and Salt-Peter: in that of *Sul. Polychrestes*, made of Nitre and Sulphur; and that of Flowers of Antimony, with the same Nitre. Projection ought to be made of a small quantity, and at several repetitions. For if you should put too much Substance at a time, the violent activity of the Nitre would break all the Vessels, or make the Substances run in the fire. *Detonation* raises the impure and volatile Sulphur from the matters, partly into the air, and partly immediately above the more pure mass. The terrestrities are usually found mix'd with the volatile parts, of the impurities whereof they are the cause. But the principal internal Sulphur is found in the pure mass: which by reason of its weight, quits the impure parts, to descend to the bottom of the Vessel.

Fulmination, which is also call'd *Fulguration*, is much more violent then *Detonation*, especially that which is us'd to one particular Preparation of Gold. It is so call'd because it acts like thunder, working its effects from top to bottom, according as the matter finds resistance at the top. Fulmination of Gold happens through the union of *Aqua-regalis* with it in dissolving it, as also of the Salts of the Tartar, united with it when the Gold was precipitated into Lime. Whence it comes to pass, that this Lime of Gold precipitated, retains still some particles of the Salts, especially of the Ammoniac contain'd in the *Aqua-regalis*, to produce Fulmination upon the least heat that should happ'n to the Lime of Gold. And this Fulmination is no otherwise made then by the forc'd division of the Salts from the Gold by the means of the heat. There is another Fulmination less violent, which is made by the Salt of Tartar, Nitre and Sulphur, in a certain proportion: which is not so dear as that of Gold, and is more easie to do; the description whereof is in the third part of this *Pharmacopoeia*.

CHAP. XXXVIII.

Of Reverberation, Lapidification, and Vitrefaction.

Reverberation serves to open, separate and calcine the Substances of mix'd Bodies, by means of a flaming fire, that encompasses and reflects upon the matter. It also serves to take away the corrosive Spirits of Nitre, Salt and Vitriol, as also by means of the Retort to separate the volatile parts of certain Plants and of all Animals. It is two-fold; one done with an open fire, which is that of Calcination; the other with a close fire; as is that of Distillation.

Lapidification is the converting of more then one Medicament into the form of a stone. Which comes to pass by the dissolving any Metal in a corrosive Spirit, and causing

causing the dissolution to boyl to the consistency of stone. As when we dissolve Silver in *Aqua-fortis*, and boyl that dissolution to the consistency of a stone, which they call *Infernal*. Divers fix'd Salts are also converted into Fix'd-stones. We also turn into stone Vitriol, Alum, Salt of glass, and many other Salts of Plants, mix'd with Bole-Ammoniac, of which is made the *Medicinal Stone*. Many artificial Marbles and Jewels may be also made by several Preparations.

Vitrification by means of a violent fire turns some Substances into glass. It is practis'd upon Metals, Metallics, and several sorts of Minerals: among the rest upon Stones, Flints and Sands, as also upon the Ashes of divers Plants.

CHAP. XXXIX.

Of Precipitation.

Precipitation is effected when a Medicament, dissolv'd by any fix'd corrosive Salt, or by some acid gnawing Spirit, or by some homogeneous volatile Spirit, quits the dissolvent, and precipitates or falls head-long to the bottom of the Vessel. To hast'n it, we must make use of Precipitants, which at least in all outward appearance are of a nature quite contrary to the Dissolvents; and which may either joyn with them or make a confusion among them, or weak'n them, and so by some means or other constrain them to quit the Body which they held in dissolution. When we have dissolv'd Pearls or Coral in the Spirit of Nitre, or Vinegar, we usually have recourse to some fix'd Salt, as that of Tartar, the Liquor whereof being pour'd upon the dissolution, unites with the acid Spirit which was in the dissolvent, and constrains the Substance of the Pearls and Corals which it dissolv'd, to precipitate to the bottom of the Vessel. When the flowers of Sulphur have been dissolv'd with Salt of Tartar, we must have recourse to some acid Spirit, as that of Nitre or Vinegar, or some acid Salt, as Alum dissolv'd in Water, to make the Precipitation. Mercury dissolv'd in *Aqua-fortis*, or in Spirit of Nitre, is precipitated by Sea-water. But because Sea-water contains in its composition an acid part, which in some measure counterballances the fix'd parts, it does not act so powerfully for precipitation of Mercury as Salt of Tartar, which is void of all acid Spirit, and therefore proper to embrace the acid Spirit which dissolv'd the Mercury, and to compel the one to quit the other. But as it acts with more violence than Sea-salt, it leaves in the Mercury a kind of a red colour. Whence it comes to pass, that we never use any other then Sea-salt when we desire that the Precipitate should be white. However there is another white Precipitate to be made of Mercury, by precipitating it with Salt of Tartar, if you make use therein of Mercury sublim'd and dissolv'd in Water of Sal-Armoniac: which after it has corrected the impressions which the Salt and the Vitriol had left in the Mercury by its sublimation, causes the Volatile Sal-Armoniac to meet with the Salt of Tartar, which is in some measure homogeneous to it. And in regard the Dissolution of Mercury sublimated in Water of Sal-Armoniac is done without any violence, as is also the conjunction of its dissolution with that of Salt of Tartar, the white which is common to both Salts, suffers no alteration, and the acrimony of the Salts fails not to be carried away by Lotions. Tartar is also proper to precipitate all sorts of vitriolated Dissolutions. Bismuth dissolv'd with Spirit of Nitre, is properly precipitated with Sea-water: But it may be also precipitated by common-water only pour'd in a good quantity upon the Dissolution: which finding it self weaken'd by the Dissolvent, abandons the dissolv'd Bismuth, and gives it opportunity to precipitate to the bottom. The Dissolution of the resinie part of Scammony, Jalap, Agaric, and the like made in Spirit of Wine, as also that of Amber, and several other bituminous Substances, are easily precipitated by weakening the Spirit of Wine with Water. Or else you may attain your end by drawing forth the Spirit of Wine by a soft Distillation, or else causing it to evaporate insensibly: For you shall find the resinie or bituminous matter at the bottom, accompanied with an unprofitable moisture, distinct, which is to be thrown away. I do not account that Precipitation of Mercury, which is commonly call'd Red-precipitate, to be one of these Precipitates: which is only a real potential Calcination of Mercury, by the means of Strong-water or *Aqua-fortis*, or Spirit of Nitre, which afterwards they evaporate without pouring any precipitating Salt upon it.

CHAP. XL.

Of Sublimation.

Sublimation is practis'd upon dry Substances, some of which are either rais'd almost altogether, or in part towards the upper part of the Vessel proper for Sublimation, and that by means of a gradual fire. Medicaments are sometimes sublim'd without any mixture, and the more pure parts are sublim'd like Flowers, leaving the thicker parts at the bottom. In this manner are the Flowers of Benjamin, Storax, and Arsenic, &c. prepar'd. Thus may Sulphur be sublim'd with an addition of some other matter: and it is observable that it will almost all mount up in Flowers, unless it be extraordinarily charg'd and load'n with external terrestreities. Sublimation is also us'd to separate the volatile Substances from the fix'd; as when we sublime in Flowers the volatile part of Sal-Ammoniac, and reserve the salt part fix'd at the bottom mix'd among the acid. Mercury is also very much inclin'd to Sublimation, and to take several shapes according to the variety of the Substances with which it is mix'd, which will cause it to act as differently. However it cannot be sublimated unless it be mix'd with corrosive Substances, or at least with such as may put a stop to its fluidity; nor without borrowing also some particles of those foreign Substances, to elevate it self and to incorporate with them: Then it sublimes altogether, provided it be perfectly united with them, and that you have observ'd proportions in mixture and degrees of fire.

Fluid Mercury is incorporated with a certain quantity of Salt decrepitated, and Vitriol dry'd to whiteness, and it is sublimated by a gradual fire in a consistence white and corrosive, which is call'd Sublimate-corrosive; so become, by reason of the particles of Salt and Vitriol which have been rais'd with it in Sublimation, and which make it a most dangerous poison. The same Mercury sublimate-corrosive mix'd and perfectly united with three fourths of its weight of fluid Mercury takes off the acrimony of the Salts, and that little corrosion which might remain in that Mercury-sublimate, might perhaps be altogether carry'd off, by resubliming it two or three times without any addition. This Mercury so sublimated is call'd Sweet-sublimate, or *Mercurius dulcis*, the internal use whereof is frequent in the cure of several Distempers, especially Venereal. Mercury is also sublimated in a very red and shining consistency, having been formerly well united with a certain quantity of Sulphur. This Mercury so sublimated we call Cinnabar, and is usually made use of in Perfums for Venereal distempers. It is useful also in painting, and to colour Spanish-wax. I say nothing of the Preparation of the Flowers of Antimony, and several other Minerals, which I refer to their proper place.

CHAP. XLI.

Of Distillation.

Distillation is an Elevation attended by a Descension of the watry, spiritul, oylie or salt parts of mixt Bodies, separated from the gross and terrestriall by means of the Fire. The natural Ascension or Elevation is that of Rain, Dew, Mists, which ascend in vapor up into the Air, and being there gather'd in a body together fall afterwards by the force of their own proper weight, either in Springs of Water divided, or else in drops or in lesser parts, according as the vapors are more or less abounding, or that they are more or less agitated by the winds; and which in falling make a kind of Distillation. The artificial Distillation is usually made after general ways: of which the first is call'd the Streight, the second the Oblique or Lateral, the third by Descent. Both the one and the other are made into divers Vessels either of Silver, Pewter, Copper, Iron, Earth, Glas; and all by the means of Fire, or of some borrow'd heat. Streight or Upright Distillation raises up the vapors high into a Vessel proper to receive them, which must be plac'd and luted above that which contains the matters. These vapors thus rais'd are converted into Liqueur, and distil through the neck of the superior Vessel, into another set below the neck and call'd the Recipient. Oblique or Side-ling Distil-

Distillation is made in crooked Vessels, which are call'd Cornutes or Retorts, to which are fitted Recipients bigger or lesser according to the nature of the Spirits which are to be drawn forth. These Vessels were invented for the distillation of ponderous Spirits, as those of Nitre, Salt, Vitriol, &c. as also for the distillation of other Spirits less weighty, as of Oyls and volatile Salts, which will not so commodiously ascend by an upright Distillation: such are the Spirits and Oyls of Woods; the Spirits, the Oyls, the volatile Salts of Vipers, Harts-horn, Ivory and many other parts of Animals; as also of certain Plants that abound in Salts and volatile Oyls; and likewise of the Spirits of Tartar, Wax, Amber, and many others. Distillation by descent is made by the putting the fire round about, and at the top of the Vessel, which contains the Substances to be distill'd, and whose orifice is below.

This fire acting upon the substances within, by degrees separates the liquid parts from the gross and terrestrial, and constrains them to descend and distil into the Vessel plac'd immediately below, and luted with the Superiour; there being however between the two Orifices of the two Vessels a little thin plate pierced through with several holes, to hinder the grosser substances from falling into the Recipient, and to give the Liquors passage, to fall into the lower Vessel. The use thereof is particularly, for thick matters, especially Wood. Though this Distillation may serve for thinner Substances; of which you will find examples in my Chymical Preparations.

There is also a sort of Distillation by descent, which is called *per Deliquium*, or by *Draining*, which is only the Resolution of Salts into Liquor, and which is more Natural then Artificial. The distilling of a Vine, cut in the Spring, may be also called Distillation: also Oyl of *Petrol*, or *Naphte*, which distils from the Rocks, and the like. Hither we also refer the Natural Balsom, and other liquids that distil from Plants of themselves, or by Incision: As Turpentine, that trickle from divers Trees, Opium from Poppy, and Scammony from its Plant.

* For in this place it must come from *Delique*, and not *Deliquium*.

CHAP. XLII.

Of Rectification.

Rectification is a new purification and exaltation of the most essential part of the mixt Body, which was formerly separated by Distillation, or otherwise. It is in use for Waters, for Oyls, for Spirits and Salts, as well fix'd as volatile, distill'd or sublim'd. It is also us'd for dry Substances, as also for Tinctures. Rectification is properly a Distillation, or new Sublimation of that which had been already distill'd or sublimated; and by that means a new separation of the aquosities, terrestrities, or other impurities, which are found intermix'd in the first Distillation or Sublimation. You may repeat Rectification so often, till the matter intended to be rectify'd have attain'd its utmost purity. The volatile Salts rise first of all in their Rectification; the Spirits and volatile Oyls follow: the Flegm appears next, or else it remains at the bottom of the Vessel with the thick Oyl and terrestrities. The ethereal spirit of Wine and Turpentine ascend first in Rectification: as it happens also to several other spiritul Waters. The Flegm follows the spirit of Wine, if you continue the fire: if not, it remains at the bottom of the Vessel. The ethereal Spirit of Turpentine, is attended by the unctuous Substances, the first whereof are less thick and less colour'd than the latter: but the resinie and thick part lies at the bottom of the Vessel. The watry part of the Spirits of Salt, Vitriol and Sulphur, ascend first in their Rectification; it is follow'd by the Spirits, if the fire be increas'd and continued; if not, the Spirits remain at the bottom of the Vessel. The Oyls ascend among their Spirits or Liquors, which were added to them to hinder their *Empyreuma*, or being scorch'd by the fire during their Rectification. Tinctures are rectify'd by Circulation and Filtration. Fix'd Salts are rectify'd by Calcination, Dissolution, Filtration and Coagulation. You may also mingle among them some small quantity of Sulphur, and burn it in calcining them, if you would cleanse them well from their superfluous moisture, which causes their dissolution; and in keeping them, makes them subject to dissolve into Liquor. As many times it happens to the Salts of Plants, which were not calcinated with Sulphur. *Regulus's* are rectify'd by repeated Fusions, and additions of some little quantity of Salt-Peter. Perfect Metals are rectify'd by the Coppel, by Antimony, by Sublimate, by the Inquart, and by other ways, &c.

CHAP.

CHAP. XLIII.

Of Extraction, Evaporation, and Exhalation.

Extraction is a separation of the more pure and most essential parts of Medicaments from the gross and terrestrial, by the means of some proper *Menstruum*. Dissolution, or at least the Addition of some other Liquor, Digestion and Filtration are almost inseparable from Extraction. This operation is well made use of for Tinctures, Essences, Balsoms, and several other liquid Preparations; but chiefly for those that are call'd Extracts: which are of a consistence solid enough to be made into Bolus's and Pills. Such are the extracts of Rhubarb, Senna, Coloquinth, Ellebore, Aloes, and the like, which are begun by the extraction which is made of their Tincture; and finish'd either by the volatile part of the *Menstruum*, by distillation, if it be worth while, or by evaporating the superfluous moistures over a gentle fire, or in the Sun, or in Horfe-dung. Extracts also of the Juice of green Plants, is made without any other addition of foreign Liquor. For it is enough to purifie those Juices by Filtration or otherwise, and to evaporate them over a gentle fire, till they come to their necessary consistency. Such are the Extracts of Wormwood, Carduus, Centaurie, Spurge, &c.

Evaporation is the elevation and dissipation of the superfluous humidity which is to be found in any Medicament. It is usually made by the means of Fire, though sometimes we also make use of the heat of the Sun; it is very often made use of in several Galenic and Chymical Preparations.

Exhalation is only practis'd upon drie things, to raise and dissipate the most volatile parts; it is made by the means of heat lesser or greater, according to the various Substance of the Medicaments. It is of use in several Galenic and Chymical Preparations.

CHAP. XLIV.

*Of Liquefaction, } and { Coagulation,
Melting, } and { Curdling.*

Liquefaction or Melting is practis'd upon Wax, Suets, Greases, Rosins, Gums, Butter, Oyntments, Emplasters, Ice, and all Substances that may be coagulated by the cold, and easily melted by heat. Metals, Metallics, and several Minerals are well coagulated by cold, and may be turn'd into Liquor by the heat of fire: But because this cannot usually be done but by a violent heat, therefore that Operation is call'd Fusion, and not Liquefaction.

Coagulation is oppos'd to Liquefaction and Fusion. And therefore it is call'd the Alteration of a liquid matter into a solid, by the privation of heat or the separation of moisture: as when the fix'd Salts have been dissolv'd in some liquor, and we evaporate the moisture over the fire, then they remain drie and coagulated. The same thing may befall them after they have suffer'd Fusion. It happens also to Metals, and other Minerals that may be run down, as Sulphur, Alum, Antimony, Nitre, Vitriol and many others, which run with the fire and coagulate in the cold. There are also Salts which are call'd Essential, which being melted in hot liquors, coagulate in the cold, as that of Carduus. We see also several dissolutions of Metals, and of several other Minerals made by strong Waters, which were very liquid while they stood upon the fire; but soon coagulated in the cold, notwithstanding the moisture which accompanys them. I pass over the Coagulation of Milk, and that which may be made by the conjunction of acid Spirits with volatile, whereof I shall shew examples in my Chymical Preparations.

CHAP. XLV.

Of Fixation, Congelation, and Chrystallization.

Fixation is opposite to Volatilization, because it fixes and stops that which was of a volatile nature, and renders it altogether durable in the fire, or else able to withstand its force for a long time. And here we must observe that Acids are the most proper principal means which we can make use of to fix Volatiles. Which I do not believe happ'ns through any antipathy, or contrariety of Substance that is between them, as many Philosophers are of opinion: for if that were true, they would certainly destroy one another, which never falls out. But my sentiment is this, That in regard of the great sympathy and inclination which they have, streightly to unite with their like parts, that is the cause that they joyn with so much swiftness, and with a kind of violence; and being once united, they are not parted but with great difficulty, and only when they meet with a Substance which more agrees with their Nature. On the other side their difficulty to unite proceeds from a certain disposition of the figures of their parts, which render them incapable to embody and compose a solid mass together, without making an assault one upon another. For though Acids and Volatiles seem to have chang'd their qualities in being mix'd and confounded one within another, though their activity be different, when they can act separately; yet they preserve their Nature and their first faculty, and fail not to demonstrate the truth thereof, when they have been frequently separated. Which may be done with mixing Salt Tartar, or any other fix'd Salt with them. For the acids are more enclin'd to unite to the fix'd Salts, then the volatile. So that joyning very close to the fix'd and adhering but very slightly to the volatile, they suffer the volatiles to be rais'd by the fire: and these volatiles are observ'd to have the same penetration, which they had before they were joyn'd and mingl'd with the acids; and the same acids may be still contrain'd to quit those fix'd Salts, when you increase the quantity of the latter, and that the former find themselves too strongly attack'd. For the fix'd Salts being in a condition of themselves to resist the violence of the fire, without the concurrence of acids, could never hinder the latter from quitting them, when they are no longer able to resist the fire, but that they must be rais'd and carried away with the acidity and force which they had before they were joyn'd together.

Congelation approaches very near to Coagulation. It happ'ns that several liquors, and several Substances liquefy'd by heat, congeal in the cold. Such are the Decoctions of several Meats and Fish, as also of Serpents, especially of Vipers, the Decoctions of Harts-horn and Elephants-teeth rasp'd, and several others; as also the Juices and Decoctions of several acid Fruits mingl'd and boyl'd with Sugar: among the rest those of Goosberries, Verjuice, Cherries and the like, to all which things they are wont to give the Name of Gellies. We may also rank under the Name of Congelations, Water congeal'd by the cold, Sucts, Greases melted before the fire, and afterwards congeal'd; as also Wax, Rosines, Oyl of Nut-megs, and several others easily melted at the fire, which always congeal in the cold; though they may be reckon'd also for Coagulations.

Chrystallization is a sort of Congelation which happ'ns to Salts, as well essential, fix'd and volatile, as also to those which are mix'd with acids, when being separated from a good part of their moisture, you let them rest in a coole place there to chrystallize; and then to be tak'n out and dry'd when you have pour'd out by Inclination the liquor that swims at the top, which is not chrystalliz'd. This Chrystallization happ'ns to Gremor Tartar, to the essential Salts of divers Plants, to Nitre variously prepar'd, to Vitriols dissolv'd, filter'd and evaporated to the very Pellicula or thin skin; and to several Minerals dissolv'd by corrosives. It may also happ'n to all sorts of purify'd Salts, separated from the greatest part of their moisture, in which they had been dissolv'd. We call the small skin or Pellicula, a kind of thin Film, which appears upon the superficies of the Salts, dissolv'd in Water; when you have evaporated the moisture over the fire, and that the greatest part is consum'd.

CHAP. XLVI.

Of Spiritualization, and Corporification.

Spiritualization is the conversion of the parts of a solid body into Spirit. It is particularly attributed to Salts, of which almost all the parts are converted into Spirit by Distillation. Such are Bay-salt, Nitre, Vitriol, Alum, &c. Several other Medicaments are to be spiritualiz'd, especially Juices, and fermented Liquors, which render their Spirits volatile and combustible, but not acid, as are those which we draw from Salts.

Corporification restores to Spirits the same body, or at least a body very like to that which they had before their Spiritualization. For Example, The Spirit of Nitre united with Salt of Tartar, or with its own proper fix'd Salt, and set to chrySTALLIZE, resumes its former body. Spirit of Vitriol, after it has devour'd Iron, being dissolv'd in Water, filter'd and evaporated, resumes the form and consistency of Vitriol. There is another sort of *Corporification*, which in embodying of Spirits causes them to take a form quite different from that of their original. For Example, Spirit of Vinegar, having dissolv'd Pearls, Coral, Saturn, &c. incorporated, assumes the form of Salt, if you evaporate the superfluous moisture that accompanies it. And this Salt of Vinegar will resume the shape of Spirit by Distillation, abandoning to the bottom of the Vessel the matter with which it was incorporated.

CHAP. XLVII.

Of Reduction, and Mortification.

Reduction is the re-establishment of mixt Bodies, or their parts in their natural Estate. As when the Spirits, united and incorporated with certain Matters, are separated from them and reduced to their former estate by Distillation. Reduction is very much practis'd in Metals: For by that means the Metals which appear destroy'd, by several Corrosions, Calcinations, Sublimations, and Dissolutions are reduc'd to the same condition in which they were, before they had suffer'd any alteration.

Mortification is a change of the exterior form, and sometimes of the consistency of the mixt Body. It may be attributed to Mercury, not only then when being mingl'd and incorporated with Turpentine, or with other oylie Substances, it loses its motion and fluidness; but after it has undergone several Chymical Preparations. It may be also apply'd to Saturn or Lead in divers Preparations. It may be also attributed to Animals or Plants, not only then when motion and growth are tak'n from them with their Lives, but also when their parts are disjoin'd, and that they have chang'd condition and form.

There are practis'd in both the one and the other Pharmacy several other manners of preparing, of which you shall be sufficiently inform'd in the following Part of this Pharmacopœa, without giving you the trouble of multiplying Descriptions in particular Chapters.

CHAP. XLVIII.

Of Mixture.

NO Man can undertake the Preparation of any Medicin before he know it: No more can any Man practise Mixture before he know Preparation. For all Medicaments are not so simple, so known, so usual, so easie to mixe, as Water and Wine.

Mixture is then the third thing a Physician ought to know and put in practice. It is defin'd, an Artificial mixture of divers Medicaments, which an Artist has chos'n and alter'd

alter'd by Preparation; and which he unites together to make a compounded Medicament. And in truth when the Ancients talk'd of Mixture, they chiefly meant that Mixture which is made of several Medicaments prepar'd to make one Composition. As when to make any Electuary the Artift chooses, weighs and orders every drug; beats those things which are to be reduc'd into powder; strains the Pulps; makes the Decoctions, boyles the Sugar or Honey with them to a convenient consistency; then mixes the Pulps and the Powders, and makes the Electuary; and so of other compositions. But I must say, That in both the one and the other *Pharmacy* there are continual Mixtures; in regard there are few Preparations that can be made up without Mixture. And though Mixture seems easie enough, and that it be truly so to them that well understand all sorts of Preparations; yet it does not want its difficulties, and requires a great exactness in a thousand things which are to be observ'd. As in the ordering of Medicaments that are to be put into one Composition; the regard which is to be had to their different Substances; the Preparation which is due to them to dispose them for Mixture; the proportions requisite for Ingredients, to bring them to their just consistency, and the form which is intended to be giv'n to the Medicament; the degrees of heat and boyling; the Vessels and Instruments to be made use of in Mixture and Boyling: the time and moment necessary, and the Vessels and place where Medicaments are to be set up and preserv'd.

The diversity of Diseases, their complication, their accidents unfore-seen, and the necessity at all times of a quick Remedy, have constrain'd the *Physicians* to invent an infinite variety of Compositions. They must frame themselves to the nature and constitution of the Patients, and vary the Applications of Medicaments, as well simple as compound, as occasion requires, to quick'n the slowness and weakness of some, and repress the violence of others. It behoves them to give them various forms and consistencies, to vary the taste, and to provide for their preservation, which cannot be done without making use of Mixture. So that mixture is not to be separated either from the one or the other *Pharmacy*: for though *Chymistrie* does not usually require either in Preparation, or in the use of Medicines, such a numerous quantity of Medicaments to be clapt together as the *Galenists* do; yet the Division and the Purification of the parts of Medicament, require a skill and dexterity altogether peculiar, as well for their Mixture as their Union. It behoves the *Chymist* to know the dissimilitude of Substances, and how to reduce them to a kind of homogeneity; to make Elixirs and universal Medicines of great virtue, which are beyond the knowledge of *Galenic Pharmacy*: as not being accusom'd to practise Mixture, but upon Medicaments incumber'd with all the parts of which they are compos'd.

Here I might seasonably dilate upon many cautions to be observ'd in the right Mixture and Union of all sorts of Medicaments: But in regard that in the following part of this *Pharmacopoea* I am oblig'd to speak of the particular mixture of every Composition, as also of every considerable Preparation, as well *Galenic* as *Chymical*; I thought it more convenient to remit the Reader thither.

CHAP. XLIX.

Of the Composition of Medicaments.

THE Composition of Medicaments cannot be accomplish'd without mixture. But the word *Composition* implies something of well-order'd, proportionate and dispos'd to produce those effects which are requir'd upon occasion from the union of several Medicaments, tending together to one or more purposes. I will not repeat here the reasons for which the Composition of Medicaments was invented. It shall suffice me to take notice, That besides the great number of Compositions which have heretofore been made use of, the *Physicians* are at liberty every day to invent more; and that in some there may be a greater, in others a lesser number of Medicaments. I must also needs say that Preservation is one of the chief ends of Composition; nevertheless many compounded Remedies us'd every day, cannot be kept long; and therefore they are never to be prepar'd, but onely when there's occasion to use them.

It is not my resolution to insist in general upon all the compounded Remedies which the Ancients have made use of; and of which they have left several prescripts. It will

be enough for me to speak of those, which are in practice at this day. To which intent I will divide all compounded Remedies into internal and external. The internal are Juleps, Apozems, Emulsions, Almonds milks and creams, Restoratives Purgative potions, Altering-phyllick, Mixtures, Gargarisms, Prisans, divers Decoctions, Bolus's, Clysters, Suppositories, Pessaries, Injections, Wines, Vinegars, and divers Juices; which may be also outwardly apply'd, Robbes, Honeys compounded, Oxymercals, Syrups, Loches, Lozenges, Conditives, Gellies, Conserve, Electuaries, Hiera's, Opiats, Confections, Antidotes, Tablets, Pills, Powders, Distill'd-waters simple and compound, Feces, Extracts, Rosins, Salts fixt, volatile and essential, Chrystals, Flowers, Magisteries, Saffrons, Oyls distill'd and press'd; Tinctures, Elixirs, Essences, Balsoms, Panacea's, Lime, Stones, Glasses, Regulus's, Sulphurs, Sublimates, Precipitates, &c. Remedies external compounded, are Baths, Half-baths as well liquid as by steam, Lotions, Embrocations, Fermentations, Bags and Caps quilted with Cephalic-powders, Frontlets, Sinapisms, Vesicatories, Depilatories, or Medicines to take away the Hair, Cataplasms, Epithemes liquid and solid; Suffumigations, Pomatums, Grains and Sweet Candles, Caustic-stones, Mucifages, several Balsoms, several Oyls, as well by infusion as expression and distillation; Liniments, Oyntments, Sear-cloths, Emplasters, Pastes for the Hands, Wax'd-linnen-cloths, Sparadraps, or Linnen-cloths dipt in melted-salves, certain Flowers, certain Magisteries, certain Limes, and certain compos'd stones, of all which I shall speak in their proper place.

CHAP. L.

Of Fire, and its degrees.

I T was not without great reason that Fire has been esteem'd at all times the most noble of all the Elements. In regard it is the principal agent of Nature and of Art in the Production of all things: it foment, it nourishes them, and gives them growth: it comforts by its light, and penetrates by its subtlety the most compact of Substances. So that I cannot imagine, by what motive, Persons that have rendred themselves famous as well by their Chymical Operations as Writings, and who never could have any reason to mis-doubt the utility of Fire, should nevertheless go about to blot it out of the number of the Elements; and instead of making it the author of any considerable production, should give it the Name of Corrupter and Destroyer. For though I make no question, but that Fire being kindl'd in wood or any other combustible matter and meeting with a continuity of substance upon which it can exercise its activity, will destroy, and continue that destruction, till it meet with no farther matter to act upon: yet all the World must of necessity be convinc'd, That besides the continual necessity we have of Fire, as well in the one as the other *Pharmacy*, as also for the support of Life, it is in our power to augment or abate its force at our pleasure; either by laying on or taking off the wood or coals, or by opening or closing the Pipes that let in the Air and quicken the Fire. Neither it is possible for me but to commend and seek the assistance of Fire in my Profession; and I am also forc'd to confess that without the assistance thereof, I had never attain'd any solid knowledge; and that what I have acquir'd would be of no use to me in the most part of my Operations, should I want Fire to begin, continue or carry them to perfection.

Under the Name of Fire, I understand not only the ordinary Fire lighted, and acting upon wood, coals, or any other combustible matters; but all Heat that produces action approaching next to that of Fire. And therefore I shall divide Fire or Heat into Natural or Artificial. Natural Fire is esteem'd to be that which comes from the Rays of the Sun. Artificial, is that which depends upon the skill of Men; according to the variety and quantity of the matter combustible with which they furnish it, and the more or less Air which they afford it. The one and the other *Pharmacy* make use of the Natural heat of the beams of the Sun in several respects: but they more frequently have recourse, and indeed at all times to Artificial Fire, which is able to do many things beyond the Natural heat of the Sun.

It is not necessary for me here to dilate upon the heat of the Sun, which we may seek and find to be more or less excessive, according to the Climates and Seasons, and the various occasions of it; it being also to be augmented and re-inforc'd by reflexion and

and repercussion, by the help of a Burning-mirror. I will only insist upon Artificial heat, and the several degrees of it; of which we must acknowledge two in general, one for Digestion, and the other for Separation.

Digestion makes use of several fires, of which the most simple and nearest to Natural heat, is that of Horse-dung, which may be more or less excessive, according to the quantity of the Dung, the time when the Dung-hill was made, and the depth of the Vessel's being plac'd in it. For certain it is, that a man cannot put his hand in the midst of a great Dung-hill of Horse-dung, if it have had time to rip'n; nor endure a rod of Iron that has been buried but a while in such a muck-hill. The heat of Horse-dung is also call'd The heat of the Horses Belly.

The Fire of the Air heated by an ordinary fire kindl'd under a Vessel of Iron or Earth fit to resist fire, and clos'd in a close Furnace, capable of receiving the Vessel which contains the matters, is accounted a moderate Fire.

The fire of a Lamp, is a fire also as moderate as equal; and yet it may be encreas'd or diminish'd, according to the bigness and quantity of wicks which you light; as also according as the Vessels are to be more or less heated. The fire of Lamps is very much us'd by those that seek after the universal Medicine; and for several Operations that require continuance of time and an equal fire, either for Digestions or Fixations.

The fire of the steam of hot water is a very moderate heat, but it cannot be continued so equal as that of Dung, the Lamp, or the heated Air. You may also increase the heat, by causing the water to boil. The use of it is only for Operations that require not the long continuance of a fire.

The fire of *Balneum Maria*, call'd the Sea-bath, is made use of by plunging the Vessel that contains the matters into the hot water, as into a Bath. It is useful for Tinctures, Circulations, Digestions, and Distillations. It is a little more hot then the evaporating Bath, of which I have already spoken. It may be so far made use of, as to make the water boil.

The fire of Cinders, improperly call'd the Cinder-bath, is somewhat hotter then all the former, if it be made as hot as it may be. The Custom is to make use of Wood-ashes sifted through a coarse Sieve, to the end they may be put into a Capsula of Iron, or of Earth able to resist the fire; and then to place the Capsula upon a Furnace proportionable, and to let down the Vessel containing the Medicaments into the Cinders or Ashes, so that there remain a good Thumbs-breadth between the bottom of the Chest, and the bottom of the Vessel; and that the Ashes may be heaped up round about the Vessel to the height of the Medicaments. The Vessel may be of Silver, Copper tinn'd within, Earth or Glass. The fire is lighted under the Capsula of Ashes, to heat them by a little and a little, and is continued or increased as occasion requires, either for digestion or distilling.

The fire of Sand, which bears also the name of a Bath, may be more powerful then that of Ashes. Whence it comes to pass, that it is call'd the fire of Separation, yet it may be more or less hot, as you make use of more or less fire; or according to the different weight and bigness of the Gravel; so that if you moderate the heat, it may serve in the place of Ashes.

The fire of the Filings of Iron or Steel, bears also improperly the name of a Bath. It's heat may be much more increased then that of Sand; but it is not much us'd.

The bare or immediate fire may afford much more heat then all the precedent fires. It is so call'd, because the fire immediately gives its heat to the Vessel, which contains the Matters; as also to the matters themselves, if they may be expos'd, to the fire, without being put into any Vessel. This fire is very much us'd in both Pharmacies, and chiefly for several Decoctions and Distillations; as also in Kitchens to dress Vi-ctuals, for which reasons it is accounted the most common and chiefest of all.

The fire call'd the fire of the Wheel; as when the fire is put into the Crucible, or in another proper Vessel; and then the fire is kindled round about the Vessel, making as it were a Wheel of fire, from whence it had its Name. This Wheel of fire ought to be at a sufficient distance, at first, from the Vessel, to heat it by degrees, then insensibly put a little nearer, with an equal fire round about, and then laid all together close to the Vessel; where it may be continued, or increas'd as occasion requires.

There is also another sort of Naked fire, called the fire of Suppression, which in degree of heat is not much unlike that of the Wheel; and which is made use of sometimes the better to fix the substances, and sometimes to separate some substance, which it causes to issue forth by the side, or to descend to the bottom. The Vessel is heated by a little and a little, environing it at first, and then covering it altogether with

kindl'd Coals, encreasing or abating the fire, for so long time, and to such a degree, as shall be requisite to perfect the Operation. Sometimes the fire of Suppression is used at the end of Distillations made through the Cornute, chiefly of those that are made in the Sand-Bath; They are also at other times made use of in the middle of Distillations, the better to draw forth the Spiritful Substances, or Oyl, which resist the fire that is under the Vessel.

The fourth, Naked fire, is that of the close Reverberatory, which is done by placing the Retort that contains the Substances, in a Furnace fit for the purpose, over a fire small at the beginning, then continu'd and increas'd at length to a great violence. The fire of close Reverberation, is us'd in the Distillation of several Spirits, especially those that are corrosive: It is made use of for the Distillations of several Oyls, and Salts, Volatile; who have no necessity of a fire so long, nor so great. This fire is call'd the fire of Reverberation, because it does not only strike upon the Vessel immediately, but because it reflects and strikes the heat back again from the top, and round about. There is also an open fire of Reverberation, which is made in a furnace that hath no covering.

The fifth fire, is that which they call the fire of Flame, or of Fusion: This is a fire more violent than any spoken of before: and which not only serves for the Fusion of several Metals, half-Metals, and Metallics, but also for the Calcination of them, and of several Stones.

There is a sixth fire, which is the fire of great Glais-houses, which is appointed to vitrifie the Ashes of Plants, Flints, and sandy Substances. This fire is more powerful than all the rest, because of the greatness, and thickness of the Furnace, and the quantity of Wood with which it is continually supply'd. It may serve to Reverberate and Calcine divers Substances. All these fires, though very much differing the one from the other, may have every one in particular their several degrees by themselves: So that every fire may be made variously great or hot, and yet not vary from its kind. We also assign to violent heats, especially to that of Reverberation, four degrees, of which the first is only made use of to heat the Vessels by degrees, and the Substances therein contained: The second is, to heat them a little more, and to make them almost red-hot: The third is, to make them altogether red-hot: The fourth, to maintain the Vessels and Substances in the same condition, as also to make them endure a continu'd fire, as violent as it can possibly be by Reverberation.

The Activity of several fires, of which Chymistry makes use to perfect her Operations, would be weak enough without the assistance of the Air, which we may call as it were the soul of fire, and the grand cause of divers effects, which we expect from it, in regard, that in an equal quantity of Coal, or other combustible matter, the fire will be more or less hot, as there is more or less Air to quicken it. Whence it comes to pass, that we must observe the necessary rules for the making of Furnaces; and together with the consideration of the distances of height and breadth, not forget inlets for the Air, and where to let it out again: so to make use of it as occasion shall serve, as well to encrease the Heat by opening them, as to abate the Heat by shutting them.

CHAP. LI.

Of Furnaces.

A Furnace is call'd a close place, wherein the Apothecary kindles, proportions and orders his fire, for all sorts of Compositions, or Preparations, both Chymical and Galenick. Furnaces have been invented for the conveniency of the Artift; that being master of his fire, he might be able, either to increase or abate, and use it effectually upon all sorts of Substances, as occasion requires.

The Structure of Furnaces, is very various; because it depends as much upon the Nature of the Substances, and the Operation there to be undertaken, as upon the Genius and Skill of the Artift, who ought to understand as well how to invent them, as to build them.

The matter whereof Furnaces are composed and built, is very various; and as to that, there is as much regard to be had to their bigness, as to the place and use to which they

they are appointed. Those in great Glafs-houses are built of a thick strong Stone, able to resist fire, as well because of their extraordinary bigness, as because it is requir'd that they should last long. We also cut and fit one, two, or more of those thick Stones, and of the same Nature, to make lesser Furnaces, appointed for other uses. Furnaces more used, are generally composed of Brick, sometimes squared and long, sometimes moulded into portions of a Circle, whereof some make a fourth, a sixteenth, and some an eighth. These Bricks are sometimes laid one upon another, without binding them with any Morter: especially when the Operation is in haste, or requires no great caution.

These Furnaces may be raised and taken down, according to a Man's pleasure. But generally they build their Furnaces with Brick, laid and bound with several sorts of Mortar, according to the diversity of the Earth, and the violence, or remissness of the heat which the Furnace is to endure.

There are also other Furnaces call'd Portative-furnaces, because they may be carry'd and plac'd where a Man pleases; which are oft-times all of one piece, but most frequently of two, three or four, joyn'd and plac'd one above another; and may be also dis-joyn'd as occasion requires. All these Portable furnaces, as well those that are of several, as those that are all of one piece, have their place for the ashes, their Grate, their Hearth, their Doors, their Duomo's, their Registers, and all their other parts, like the Furnaces which are made of Brick. The materials of these Furnaces are usually a fat Earth, pounded together with the powder of pots made of Potters-earth, and Sand proportionably mix'd together, with Water sufficient to bring them to a paste. They are afterwards bak'd in a Potter's Furnace among other earth'n Pots.

All Furnaces are either op'n or cover'd: The op'n Furnaces have no Coverings, whereas they that are cover'd have their hollow Coverings like Domo's, that cover the Substances therein contain'd, and prevent dissipation. The most part of *Galenic Preparations* or Compositions are made in open Furnaces, though the same Furnaces may serve for several Chymical Preparations. The round shape is not to be preferr'd before the square as to the outward form; in regard there is little difference of the one from the other, as to the action of the Fire; however the circular figure is to be desir'd as much as possible for the interior part of the Furnace: because the heat acts therein with more liberty, and because therein it imparts it self more equally then in any other figure. Observe by the way, That the thickness of Furnaces is of great advantage to preserve the heat of the fire, and resist the coldness of the Air, which usually dissipates a good part of the heat of Furnaces that are too thin. The ordering of the Air is also as necessary as that of the Wood or Coal, in the government of the fire; in regard, as I said before, the letting-in or keeping-out the Air, increases or abates its force. Whence it comes to pass that in the distances and proportions, which are to be observ'd in building Furnaces, to give the fire that air which is usually necessary, after you have made convenient doors in those parts of the Furnaces where the air may easily get out and in, you must have stopples of the same, to stop those out-lets, when you would moderate the power of the fire, or to op'n them when you would increase it. Which may be better apprehended in the following Examples; and first, in the description of an op'n Furnace, very convenient for daily use, and built in that manner that you shall find three different spaces; that is to say, The place for the ashes, that for the Hearth, and that whereon to place the Vessel which contains the Substances.

This Furnace must be made of Brick bound together with one sort of lute; which is usually compos'd of fat Earth, Sand, the scum of melted Iron, Hair and Horse-dung kneaded and wrought together with Water. It must have its place for the Cinders, its Grate, its Hearth, its bars of Iron, the place for the Vessel, its Doors and Registers. You may also afford it a hollow round Cover, and a fourth place, which may serve for the fire of Reverberation. This Furnace is usually square, and ought to be seven and twenty thumbs-breadth or inches high, and above twenty broad for every square; so that the interior space must be twelve inches square. The place for the Cinders must be eight inches high, upon which the Grate ought to be plac'd from side to side a-cross, taking up about an inch of the thickness of the height of the Furnace. The Grate must be made of square Iron-bars ten or twelve **lignes* thick; they are to be made of a length proportionable, and flattened at the ends where they are to be fix'd. But this flattening ought to be irregular, and only upon the two Angles, so that when the bars shall be plac'd, one of their Angles may turn directly upwards, and the other Angle tend in a

**A Ligne is the third part of a Barley-corn, or the twelfth part of an Inch.*

streight

streight line to the bottom, and the other Angles face the resembling Angles of the other bars that are collateral with them. There ought to be but the distance of four or five *lignes* between bar and bar; which is wide enough for the air to enter that is requisite to burn the coal; and close enough to keep the coal from running through the Grates. In the Cinder-place must be left a door about the breadth of an ordinary Brick as high as the Cinder-place in the front of the Furnace. To this door must be fasten'd a plate of iron about five or six *lignes* thick, about three inches broad, and eight inches long, which is to be instead of a Lintel, upon which a Brick must be laid. There you must go on and build the Furnace round about, leaving a door for the hearth as large as that for the under-room. These doors are to be directly one above another. That of the hearth ought to be six or seven inches high: and to that must be fasten'd a plate of Iron as to the door of the Cinder-place, which plate must be cover'd with a good Brick. About this height you must leave two holes, each so big as to put a good large wall-nut through them. These holes must be directly opposite one to the other, and every one in the middle of the sides of the Furnace. These holes must also be made quite thorough, to hold a bar of Iron, if need be, to sustain a Vessel. Then raise the building of the Furnace four inches above those holes, which is a height sufficient for any ordinary Furnace, and will serve for all manner of Decoctions. But if you design it for uses of more consequence, you must continue to build up the Furnace, till it be rais'd eighteen inches above the Grate, so that there may be allow'd between eight and nine inches for the height of the hearth, and that the rest may be to place the Vessel that contains the Substances. Then you must fill up the interior Angles of the Furnace with good lute mixt with pieces of Brick, so that the inside may be like a circle. But you must leave in the inside of every Angle an op'n hole wide enough to put your finger thorough. These holes must be hollow'd towards the hearth, to let in the air which is necessary to feed the fire. They are call'd by the name of *Registers*, because they serve to govern the fire. They must have their stopples made of the same materials as the Portable-furnace, to stop them when you would abate the force of the fire. The Hearth-place also ought to be built in such manner, that it may the more and more contract it self the nearer it comes to the bottom; so that the same bottom may not be above seven or eight inches in diameter: and that as well to spare coal, as to cause the fire to extend it self towards the middle of the hearth. The inside of the Furnace insensibly ought to enlarge it self at the top, for the conveniency of larger Vessels, of which you may have oft'n occasion to make use. These furnaces may be convenient for those Distillations that have need of a Reverberating-fire, by making on the one side a hollow notch to put in the neck of the Retort, and covering the furnace with a proportionable Duomo, that has a hole in the middle; which will serve as well as the four Registers, which will lie hid under the basis of the Duomo. By this means you may have a Cover'd-furnace, which may be of use for divers sorts of Meltings and Calcinations, if you only make two or three doors to the Cinder-place; for the air that enters in at those holes will very much enliv'n the force of the fire. This thought engages me to give you the description of three Wind-furnaces, by which the Curious may find wherewith to satisfy themselves, and be able to make those fusions of Metal, which *Chymical Pharmacy* may have need of.

Draw a Plat-form, and build a square of twenty inches in diameter, leave in the middle of every front of the square an overture of four inches broad: Which four overtures shall be four doors; then build up with Bricks all the four fronts of the square, reserving still the thickness of the doors: the thickness of the walls shall be the breadth of the Bricks, that is to say, about four inches; then raise the building two foot higher: but as you build, leave in every corner of the furnace a stopping-hole, beginning at the bottom, and tending upward toward the corner which is diametrically opposite. This hole ought to begin about the fifth inch of the building, and ascend within two inches of the middle of the Grate. These four holes must be strengthen'd every one with a Pipe of Iron about two *lignes* thick, and three foot long, made like a straight Trumpet; about four inches wide at the exterior mouth, which must be turn'd downwards, but contracting and tapering to the upper part, till the hole be no bigger then to put a Man's finger in. These four Pipes are to be solder'd with Copper, and to be fix'd as you raise the furnace. Upon this Building rais'd two foot, you shall lay your flat bars of Iron, six or eight *lignes* thick: and four inches broad, which shall bind the four walls of the furnace. You must put the Grate upon two of these bars of Iron opposite the one to the other, the bars whereof shall be of the bigness, shape, and flatted at the two ends, like those describ'd for the former Furnace,

furnace, and are to be rang'd and fix'd in the same manner. Then continue the building above the bars of the Grate, and above the plates of Iron, as well as over all the rest, without leaving any new door; and raise it ten inches high, which will be room sufficient for the Hearth, and whereon to place the substances which you intend to calcine or melt. Then fill the internal Angles of the Hearth-place with Lute, well-mix'd with pieces of Brick, so that the Internal Figure may be circular, and then taper again by a little and little till it come to the door, as I have already said of the preceding Furnace: You must cause a Potter to make a Duomo Cover, all of one piece, the bottom whereof must rest upon the inner brims of the Superiour part of the Furnace. This Duomo ought to be about an inch and a half thick, hollowed like a Vault, about six inches in height. The Furnace ought to have one door beginning at the bottom, about five inches broad, and four inches and a half high, and a stopple of the same material as the Duomo, of the same thickness, with two holes bor'd through it of an equal bigness toward the middle, somewhat long, and one by the side of the other, and so made as to receive a small pair of Nippers, to take off, and put on the Stopple as occasion requires.

The Duomo ought to be open in the middle of the upper part, and the opening ought to be round, about two inches in Diameter, to serve instead of a Register. You may set over the opening of the Duomo, one or two Pipes upright, the one upon the other, about five or six *Lignes* thick, their hollowness being proportionable to the Overture of the Duomo, about three foot in height. The Coals kind'd in a Furnace thus order'd, shall give a violent heat able to melt or calcine any Minerals, that fire has power over. This furnace will plainly demonstrate the force of the Air in the operation of fire.

But you shall observe an effect much more powerful, if you build a Furnace after the following manner. Build a wind-Furnace three foot from a Well, equal in its dimensions, to that which I have already describ'd, excepting the Pipes at the four Corners, which you may let alone. Provide a Tunnel of white Latten, about two inches in Diameter, the bottom whereof is to be five or six times as wide as the rest of the Pipe, to give the more free entrance to the Air. This Pipe ought to be very long, so that it may reach from about half a foot above the Superficies of the water of the Well, to that part of the floor upon which the Furnace is built. The upper end of the Pipe must be crooked, and somewhat Tapering, so that it may enter and fix it self in a new Pipe, which is to be of ordinary Iron well strengthen'd, and Tapering toward the head, the hole whereof must be no bigger then to admit the end of your Finger. This last Pipe must pass through a hole made on purpose under the border of the Well, level with the floor, the great hole or end being strongly riveted into the lesser end of the great Pipe of white Latten. It must be of a sufficient length, and retorted in such manner, that it may ascend insensibly, with its point ready to pass through a hole underneath one of the bars of Iron, which are placed above the doors of the Furnace, and which reaches toward the bottom of the Crucible containing the substances; which must be plac'd upon a round of Potters Earth, plac'd in the middle of the Grate. You must also make a hole, though never so small, in the Wall of the Furnaces, opposite to that where the Pipe enters: But it must be higher then the first, so that it may appear in that part, whither the wind of the Funnel shall be carry'd. This Engine produces an effect altogether extraordinary. For in the midst of that great noise which the enclosed air makes, in passing and repassing through the Funnels, you shall perform in less time, and with less Coals, what you should hardly accomplish with a great Fire, without the help of this, or some such like piece of Art.

The third wind-Furnace is less troublesome then the preceding: and it is to be received with so much the more applause, considering the last years success of that which I built in the Chymical Laboratory in the Royal Garden.

This Furnace must be square, two foot high, and two foot in Diameter: It must have one door to its Cinder-place, in the middle of the front-Wall, close to the floor, which serves for the Basis of the Furnace. This door must be eight inches in height, and eight inches in breadth. The Walls of the Furnace, ought to be about seven inches and a half thick, so that there may remain a void square place in the middle about nine inches in Diameter. They must be built of Brick, and good Lute: and when they shall be rais'd equally to the height of the door, you must cover the top with two good plates of Iron; then in the inner part of the Furnace, next to the Walls lay four square Bricks, every one big enough to cover all the one side, about an inch thick: thus you shall fix them streight to the Walls with the Lute of the Building; and so order it, that the inside

inside of the Furnace may be square, and the four Bricks so levell'd, may be able to sustain a frame of Iron, fit to bear such substances as are to be expos'd to the fire in the Furnace. This frame is to be an inch thick, about nine inches in Diameter, and compos'd of a square joyn'd together with soder, or otherwise, each Bar whereof ought to be an inch thick, and an inch broad. In this square there must be a cross of Iron, in breadth and thickness equal to the Bars; so fram'd that it may rest with the half Iron, upon the square, without exceeding its thickness. This square must be fix'd upon the level Bricks: but before you fix it, provide a round Copper-pipe, soder'd with good soder, being about fifteen *Lignes* in Diameter, and about six foot long, not comprehending the two ends, which must be bent; the uppermost of which must be so large, as only to imbrace closely the neck of the bellows, which are to be placed above; and a little upon the one side of the Furnace. As for the other end, the lower part of its retorted-point ought to taper in that manner, that it may be able to admit no more then your finger. This lower end must be an Inch longer then the thickness of the Wall of the Furnace, and so bent that it may penetrate in a direct Line cross the side-Wall of the Furnace; and that the point not entring above an inch within the inside of the Furnace, and penetrating one of the four square-Bricks, may only reach within an inch below the Quadrate of Iron, whereof I have spok'n. The principal body of the Pipe, ought to run in a Perpendicular Line, along the middle of the side of the Furnace: and there to be fix'd with Lute, as far as the height of the Furnace will permit. That which is over and above may remain bare, or else be wrapt up with some matter proper for its preservation. The lower end of the Pipe must be fix'd in the Wall of the Furnace; so that no outward Air may enter from thence into the Furnace.

After you have well fitted the end of the Funnel, and plac'd the Iron-square upon the four streight Bricks, then continue to carry up the building of the four Walls of the Furnace. But take care in the mean time to furnish the inside, with square upright tiles, about an inch thick, like to those below, so that there may be two rows, each of four tiles set one upon another, so that the void square of the Furnace, may be in all about seven inches in Diameter, and about fifteen inches high above the square of Iron. In the mean time, you must prepare a square piece of cast Iron, about eight or ten *lignes* thick, proportionable to the void space of the furnace, and which must be notch'd at the Corners, about the breadth of an inch. This square is to bear the Crucibles, and other Vessels; and the Notches, or Semi-circles, are made to give requisite entrance to the wind of the Bellows, to quicken the fire of the Hearth.

Sometimes upon this Iron square, they place a round cake of furnace-earth, a good inch thick, to bear the Crucible or vessel, containing the substances. You must also get ready a square of furnace-earth, somewhat thicker and larger then that of Iron, without any Semi-circles cut in the corners, to cover the upper part of the opening of the furnace, when the Crucible is plac'd therein, and that you intend to increase the fire. At the same time you must have great double Bellows, like the Goldsmith's, which you must place at a height equal to that of the height of the Pipe; to the end you enter and joyn into it, as close as may be, the nosles of your Bellows; and look that there be not the least chink, or cleft for the wind to get out, that is to enter into the Pipe. These Bellows ought to be so plac'd, that by means of a cord fastned at one end to the upper board of both Bellows; and at the other, fix'd to the end of the little beam fastned above, it may be easie, by drawing a cord fix'd to the other end, to raise and let fall the Bellows-boards, which rising and falling successively like an Organ-bellows, keep a continual breath. The wind of these Bellows, and the structure of this furnace, the door being well-luted, with a little Coal cause a heat much more violent, then a far greater quantity should do in the ordinary furnaces. They that have seen the good effects and the little Coal it consumes, will not blame me for giving you the description and form of it.

The *Athamor* or *Athammer*, is a Furnace that cannot afford heat enough for operations that require a violent fire; but very convenient for those that may be done by a moderate fire. The Name comes from the *Arabians*, who call the Name of an Oven or Furnace *Tannaron*. The *Greeks* have call'd this Furnace *Αναστω*, which signifies *without trouble*. For which reason it is by others call'd *Piger Henricus*, or *Lazie Henry*. Some have giv'n it the Name of the *Philosophical Furnace*, or the *Furnace of Secrets*. This Furnace is as much us'd, as it is variously built not only for its height, breadth, and shape of the place which is to contain the coal; but also for the shape, number and use of the Furnaces, which are to be built next the Tower; and which are to be heated by its fire, as also for the manner of imparting their heat. The first design of those that invented the *Athamor*, was, that they might be able to heat with the same fire,

fire, and with little trouble several furnaces at once. Wherein they have succeeded very well by means of a high Tower, which they have furnish'd with a Grate and a Cinder-place, a door and openings necessary for the imparting of heat: and having kindl'd the fire upon the Grate, they fill the Tower with Charcoal, cover it at top, and by vertue of the Charcoal which kindles by degrees, and which may well burn with an equal heat for twenty four hours and more, they impart an equal heat at the same time to several Furnaces near the Tower: by means of the openings made upon the sides of the hearth of the Tower, and those parts which are next the Furnaces. But though their invention have been effectually commodious, yet there was afterwards a kind of Tower invented, the coals whereof fall into the hearths of the furnaces which are plac'd about it, and which contain the Substances; which by that means are more vehemently heated, then they would be by a heat that only came side-ways, and onely from the hearth of the Tower. I give you the figure as true as it was possible for me to do, both of the one and the other of these *Athamors*, and a particular Description of the latter as being less known, though much more useful. And that you may the better understand it, I will make it of one Tower plac'd between two furnaces only, of which one may serve for a *Balneum Maria*, the other for the Bath of ashes or sand.

Raise the Tower and the two Furnaces upon a plain ground, which you may build of Bricks and Lute against any wall. This flat ground must take up five foot and two inches in length, nineteen inches and a half in breadth, and eight inches in height. The Tower must be rais'd and built upon this Plat-form with two furnaces, and plac'd between them both. The height of the Tower must be 3 foot and seven inches, the breadth twenty six inches, and the length equal to that of the Plat-form. The height of every furnace must be twenty inches, the length eighteen, and their breadth equal to that of the Tower. First you must raise upon the Plat-form eight inches and a half of massie building for the Tower onely, according to the breadth and length already set down: Upon which Massie-building, thus rais'd, begin the outward walls with the inside of the Tower, and leave the void place for the coals. It will be also expedient at the same time to raise the two Furnaces which are to be joyn'd to the Tower and to depend upon the same Building. The Tower must have no opening before; nor must it have any opening in the sides, in its height above that of the Furnaces. Only it must have the two Canals appointed for the coals, separated by a partition-wall, the entries whereof must be above the Tower, and the vents must butt upon the hearth of the Furnaces. The outward-walls of the Tower must be seven inches thick; the inward not above four; but it must have six in length. After this raise the walls before and behind to the height of four inches, and at the same time the middle-wall, which must not be above a Brick broad, and six inches long. Then provide a thin piece of Iron beat'n out, about two *lignes* thick, and two foot four inches in length, which you shall cut in such manner, that it shall not have above six inches of breadth in the extent of four inches; which are to cover the breadth of the middle-wall, and that that which remains beyond the four inches, containing a foot in extent, may have eight inches of breadth in the end, and on the two sides contract it self like a Lozenge, to the part where the Plate is not above six inches broad. This Plate must also be bent in such manner, that the part which has but six inches, being plac'd flat upon the middle-wall, and covering it exactly, the two wings may possess the sloping of the height of the four inches which are allow'd to the middle-wall, and butt upon the side of the Building which ought to be opposite to the Hearth of the contiguous Furnace; so that the coals may slide easily a-long that Plate into the Furnace. Then must you neatly make a half-round hole in the walls to give way to the extent of the wings, and fill up with Lute and pieces of Brick the under-part of the sloping of the wings, to prop them up and keep them from bending. Then go on, and raise all the walls of the Tower, leaving the void space requisite for the Canals, which must every one contain as much in length and breadth as the middle-wall which separates them. Then provide bars of Iron flatt'd and harden'd, to correspond with the Plates; and which resting upon the walls that are next the Furnaces, may be strong enough and bow'd in such manner, that leaving an equal distance of four inches wide over all the upper-part of the sloping of the Plates, they may support the Building necessary to compleat the Tower, which must be in all three foot and seven inches above the Plat-form. In building the Tower, take care that the inside of the Canals be well clos'd, and that they may somewhat enlarge themselves towards the bottom, so that the coals at the top may the more easily slide down; and succeed to those that are burnt. You must also make two stoppers of Furnace-earth, big enough to stop the overtures of the Canals at the top of the Tower, after they are fill'd with coals.

Thetwo Furnaces must have every one their Cinder-place, their Grate, their Hearth, and must be wide enough to place therein at the top the *Balneum Mariae*, and Sand-bath. They must have also doors to their Cinder-place and Hearth, which must be made in the one and the other, quite joyning to the Tower. The Cinder-place must begin from the Plat-form describ'd before. The door ought to be five inches high and four broad. And it must be cover'd with a Plate of hardn'd Iron, upon which you must lay a whole Brick, which will serve for a stay to the door of the Hearth, which ought to be directly over that of the Cinder-place, and is also to be cover'd with a plate of Iron and a whole Brick, as the former. You must also fixe the Grate at the same time, and to the same height, as the Plate put upon the door of the Cinder-place. The inside of the Hearth ought to be nine inches in Diameter; but the void place above, where the Baths are to be set, ought to be twelve inches in Diameter. Then go on, and continue the building of the two Furnaces to their height appointed. Nor must you forget to fill up with Lute and pieces of Brick the inward corners of the furnaces, and to taper them by little and little toward the bottom of the Hearth.

It is also requisite that those furnaces should have their holes or Registers at the four upper-corners, and their stoppers ready upon occasion to increase or abate the heat of the fire. At the same time make the stoppers for the doors of the Cinder-places and Hearths.

If you are careful to follow all the proportions which I have set down for the building of this *Athamora*; if after you have kindled the fires in the Hearths of these furnaces, you fill the Canals of the Tower, with Coal neither too big, nor too small; and if after that you stop up the upper-holes of the Tower, and the doors of the Cinder-places, and Hearths, you may be sure to have an equal fire, which shall continue for four and twenty hours at least. And this fire will also heat more fiercely, if you give Air to the furnaces through the Cinder-place, and Registers.

The other *Athamoras* require not so much circumspection as this, because the Coals fall not from the Tower, but must from thence impart their heat to the Furnaces which environ it. This Tower may well be square, but it is usually the custom to make them round, to the end it may impart its heat to the greater number of furnaces. These *Athamoras*, are generally plac'd in the middle of the Laboratorie. This Tower has but one Canal, but it has a Cinder place, with its door, a grate, and a little door for the Hearth. There are also Plates of Iron, fit to stop the breathing-holes of the Tower, when you would hinder the Tower from communicating its heat to a furnace that has no need of it. I suppose, that by the exact description, which I have made of the preceding *Athamora*, you may easily judge of the building and use of this, so that it may suffice only to give you the Figure of it.

The first furnace, of which I have given the description, may well serve for an Example of a Reverberating furnace; But because a Man may have occasion for a good quantity of Acid Spirits, and Corrosives; and for that one Retort alone requires almost as much care and fire, as many Retorts together, I thought it my duty to impart the furnace of Reverberation, which I use my self, to distil with four Retorts at a time, which is as regular, as commodious, and certain.

These furnaces ought to be two foot and eight inches long, and two foot and six inches broad, and two foot and four inches high; The form of it ought to be four-square; The Cinder-place must be eight inches high, the door must be in the middle of the Front, six inches broad, and as many high. The Walls of the two sides must be six inches thick as far as the Cinder-place. The Walls behind and before need not be above four inches thick, no more then the Walls of the sides from the Grate upward. You must have bars of Iron a foot long, of the form and bigness of those of the first furnace, and flatted at the ends, and they must be laid also five *Lignes* one from the other. These bars are to rest upon the inner part of the side-Walls, and are to make the Grate that is to extend from the Wall before, to that behind. Upon the door of the Cinder-place, you must fix a flat-piece of Iron, about seven or eight *Lignes* thick, and lay a Brick upon the plate. There must be a door left for the Hearth, over that of the Cinder-place; they must be both alike, and both covered with a thin plate of Iron and a Brick. The Walls must be built of an equal height, for seven inches above the Grate: and there must be laid two square-bars of Iron, from fifteen to sixteen *Lignes* in Diameter, which ought to be almost as long as the whole length of the furnace. These bars must be fix'd flat-ways, so that they may divide the inward breadth of the furnaces into three equal distances. These bars are to bear two Retorts each of them, at the time of the Distillation. Then go on, and raise equally the Walls of the furnace

nace above the great bars, to the height of four inches, then leave two openings in the two side-Walls above the Iron bars, opposite one to the other. These openings ought to be four inches wide, and be continu'd to the height of the walls, for they are to receive the neck of the Retorts, the bodies whereof are to rest upon the bars, with their back-sides one against another. Take care to fill up the inside corners of the furnace with Lute, and small pieces of Brick, to make them in some manner circular, and so that the Hearth may slope like those of the foregoing Furnaces; and that the fire may not fall into the corners, but may always carry its force to the middle of the Grate. Then equally raise round about, all that there is to be more of wall, to the entire height of the furnace. Which done have ready a plate of cast Iron, at least half an inch thick, about two foot, and two or three inches long, and about twenty inches broad, and lay it upon the top of the furnace, to cover the void space, when you have fix'd the four Retorts. You must leave three Registers upon each side of the plate: that is to say, one at each corner of the hinder part of the furnace, and one just opposite to every Retort; lute all the rest of the circumference of the plate, and prepare stoppers for all the rest of the Registers and doors, to use upon occasion, especially at the beginning of the Distillation. Take notice also, that after you have plac'd the Retorts upon the bars of Iron, and put their necks through the openings of the furnace appointed for that purpose, you must with Lute and pieces of Brick, close all the void spaces, which the necks of the Retorts cannot fill up, so that there may be in those parts no breathing-places, but those of the Registers. In this furnace you may give to the four Retorts all the degrees of fire requisite, and the success will answer expectation, if you observe the rules which I have prescrib'd, as I come to discourse of particular preparations. You may at the same time make use of a fire for Distillation, by vertue of a square kind of Capsula, made of plates of Iron rais'd like walls, which will make an enclosure of about six inches high, proportionable to the bigness of the Iron-plate, which covers the void place of the furnace. This square Capsula must be plac'd upon that plate, and fix'd with Lute to the sides of the plate, and then fill'd with Sand as much as it will hold. In this Sand you may set several Vessels, containing such substances as you would dissolve, digest, or distil; or you may make any other preparations, which the Artist must fit to the degrees and length of the fire, which the principal Distillation requires.

You may in the first furnace which I have describ'd make a great number of Distillations, as well upright as oblique; but it will not serve for those that are made by descent, unless you change the whole order of the furnace, which engages me to give the description of another, that is proper for those sorts of Distillations; which, nevertheless, may be made either bigger or lesser, according to the quantity of substances you would distil.

Draw the Dimensions of a furnace, round or square, four inches thick, and twenty inches in Diameter. In the lower part it must have a door eleven inches high, and eight broad, upon which you must fix a strong plate of Iron, as is said already. Provide also a bar of strong Iron, four inches wide, in the middle whereof must be a round hole of three inches. This bar must be laid a-thwart upon the middle of the furnace; then provide other bars of Iron of a sufficient length, of which make a kind of a close Grate, of each side the bar of bor'd Iron; then go on with the building and raise it a foot above the Grate. Then prepare an Earthen Vessel glaz'd within, and made like a *Cucurbit*, with a streight neck, into which put wood, or the substance which you would distil: Then prepare a cover of Silver, Latten, or of Copper Tinn'd, so made as to cover the Orifice of the Vessel, and surround the neck, like a Capsula lid, the bottom whereof must be bor'd through with several little holes like a sieve. Then take another Vessel of glaz'd Earth, or of Glass, the mouth whereof must be so dispos'd, that the end of the neck of the *Cucurbit*, containing the substances, may with its bor'd cover enter in, yet not descend farther into the body. Then set the Vessel upon its Orifice, and put it through the hole in the middle of the bar, and so into the Vessel which is to serve for a recipient, and must be plac'd underneath. The *Cucurbit* must be supported by the bar of bor'd Iron: and then kindle round about it a fire, at first very gentle, only to give a soft heat to the substances, and the Vessels, then increase it by little and little, and from time to time till it cover all the *Cucurbit*, if the substances be solid; and when you have sufficiently continu'd your fire, you shall find in the Vessel plac'd below, a liquor containing the most essential parts of the substance which you have distill'd. By this means you may draw forth a Spirit out of Vitriol, having calcin'd it till it become yellow, and then putting it into the *Cucurbit*, in little pieces and not in powder, and a good quantity together; but this Spirit is much inferiour to that which is drawn forth by side-long Distillation.

I dare affirm that the two furnaces of Reverberation which I have describ'd, are very proper for the Distillation of Acid, and Corrosive Spirits; But that is no reason why I should not shew you the Structure, and use of the following furnace.

This Furnace ought to be two and twenty inches broad in the square, the walls four inches thick, so that the void space within ought to be fourteen inches diameter. This Furnace must have at the bottom, in the middle of the front, a door for the Cinder-place, four inches square, which ought to be cover'd with a good plate of Latten proportionable; then continue the whole Structure six inches high; then fix the Grate upon Bricks of full measure, set and joyn'd to the inner-wall of the Furnace, of each side: The bars must be like to those of other Reverberating-furnaces. Then raise all the walls of the Furnace equally, nine inches above the Grate; and leave in one of the side-walls an Opening, sufficient to put through the neck of a Retort; which Opening must be continu'd op'n to the top. Then raise the walls again equally one foot high above the Opening. Fill the inward-angles with Lute and pieces of Brick, as in the former Furnaces: do the same thing to the corners all along the upper part of the two sides of the Grate. Then provide a flat Duomo, made in such manner, as in covering the Furnace, to rest upon the inner-brims of the wall. Place the Retort containing the matters upon a Trevet, made so that the lower part of the Retort may be rais'd four or five inches above the Grate. Then with Lute and pieces of Brick stop up the void parts of the overtures of the Furnace, which were made for the neck of the Retort; then kindle the fire, and fill all the void space with coals from the Grate to the top, having first kindl'd the fire upon the Grate round about the under-part of the Retort. At the same time cover the Furnace with its Duomo, and at the same time lute all the joyntures, that the fire may have no air but through the door of the Cinder-place, and the little hole in the Duomo. Then fit a recipient to the neck of the Retort; leave the fire to it self, and do not unlute the Recipient, till four and twenty hours afterwards. You shall find the Spirit as you desire, and in the Retort a sediment depriv'd of all its Spirits.

I will not here dilate upon Portable-furnaces, the figure whereof is usually round and circular, because they have nothing in them that corresponds with the Furnaces which I have describ'd, especially the first. It will be sufficient to observe almost the same rules already set down, as well for the Cinder-place, Hearth, and place for the Vessel, as for the Doors, Openings, Registers and Duomo. I omit also Lamp-Furnaces, and many others useful for many things, the Descriptions whereof are to be seen in several Authors. For my part I believe I have describ'd enough for any Preparation *Chymical* or *Galenic*, at least to serve as a rule for farther invention.

CHAP. LII.

Of Lutes.

THE variety of Substances of which mixt Bodies are compos'd, together with that of the Furnaces and Vessels which are made use of in Preparation, have put the Curious upon the Invention of moulds proper for their intentions, and to satisfy the necessity of all Operations. They have found out several for the usual building of Furnaces; some to plaister, some to cover all over the Vessels of glass or earth, which are to contain the Substances, and are for a long time to resist the violence of the fire; some to joyn the Vessels one to another; others to mend the Clefs which happ'n to Earth'n or Glass-vessels, and to make them as fit for service, as if they had never been crackt. I know very well that there is no want of Directions for Lutes in most Authors, who have treated of *Chymistrie*; but because I will not refer the Reader thither, as being desirous that an *Apothecary* should find in this *Pharmacopæia* all things that he stands in need of, I will impart those Lutes which I have made use of, which are both secure and profitable.

If you would build a Furnace for long lasting, and make use of great Stones fit to resist fire, then for all sorts of Lute there is no better, then a good Mortar made of Quick-lime and Sand. But if you build with Brick according to the usual manner, use this following Lute.

Take three parts of that fat Earth, which the Bakers make use of for building their
Ovens,

Ovens, one part of River-sand, and one part of Horse-dung, work them all well together with Water, and make thereof a Mortar, to bind the Bricks, when you build any Furnaces. This Mortar may be stiffen'd with the drops of Iron and Glafs pounded, as also with salt-Water and many other things, if you would make it more firm and lasting; but these additions are useles for an ordinary Building.

If you would raise a Furnace of one or more pieces, without Stones or Brick, or make Vessels fit to resist the fire, as *Capsula's*, *Retorts*, *Aladuls*, &c. Make a Paste of two parts of Potters-earth well-dry'd, two parts of brok'n Butter-pots, both beat'n into fine powder, and one part of River-sand, well wrought and incorporated together with Water. The Furnaces and Vessels made of this Paste will be good and durable, if you be careful in the first place to drie them well in the Air when they are made; and if afterwards you bake them in the Potter's Furnace. The same Paste will serve to plaister withal and cover all sorts of Vessels either of Earth or Glafs. For it is able of it self alone to contain Substances in a violent fire, when the Vessel it covers is many times melted or brok'n. You may also make another Paste very near in goodness to this, and which will serve for many uses. Take six pound of good Potters-earth dry'd, two pound of the dead-head of *Aqua-fortis*, two pound of Butter-pots brok'n, one pound of drops of Iron, one pound of Glafs, one pound of Brick, all beat'n into fine powder, two pound of Horse-dung dry'd and beat'n, five or six handfals of Butter well mash'd and beat'n, work them all together with Water, and make thereof a Paste somewhat solid, which will serve you for the same uses.

You may also, for the same use, take two pound of Bricks, four pound of Potters-Earth, and a pound of Lime all beaten to fine Powder, and work them together with an equal quantity of Oxe-Blood, and water of the dissolution of the Caput Mortuum, or dead-head of *Aqua-Fortis*, which will serve for the same occasions as the fore-mention'd Lutes.

When you would strongly joyn together the Recipients to the Retort, in the Distillations of corrosive Spirits; the first Lute which I have describ'd and appointed for the building of Brick-furnaces, may suffice, if it be strengthn'd with a large Linnen-cloth, bound on with pack-thread. But the Lute will be stronger if you add Butter well-mash'd and beat'n to it, and if instead of common-water you work your Lute with Ox-blood, or with the dissolution of the dead-head of *Aqua-fortis*. You may also make use of the last Lutes which I have describ'd: but then it will be more troublesome to unlute the Vessels when the Distillation is over.

Amydon, or fine Wheat-flower boyl'd in Water spread upon Paper and laid on, may suffice when you only go to fit and lute the helm of the Limbeck with the Cucurbit, or to joyn the Recipients to the helm, or to the Retorts; or to lute Vessels together that contain spiritfual Substances that have no corrosion. But if you would lute them more exactly, then take the Bladder or Bowels of Beasts newly kill'd; or moisten'd in water if drie. They are very useful where the Substances are very spiritfual and corrosive. The closures and joynitures of the Vessels are to be cover'd with these Bladders or Bowels squash'd upon them, or else bound round about them with Pack-thread, leaving them to drie very well before the fire be kindl'd under the Vessel. You may also for the same purpose make use of Fish-glue dissolv'd in Spirit of Wine, or in Vinegar spread upon a Linnen-roll, and well bound upon the joynitures.

There is also another Lute very fit to plaister and cover the Retorts round about, and to make them able to withstand any sort of fire, and also to contain the matters in case the Retorts should break. Take good Potters-earth pure and well powder'd, as much Bole-Ammoniac, and brok'n Butter-pots finely powder'd; incorporate them with Quick-lime newly quench'd in a little Milk, and add thereto the liquor of the whites of Eggs, and Butter mash'd as much as will bind them all together, and make thereof a soft lute, soft enough to plaister the Retorts, three or four times, one lay above another, letting the lute laid on drie very well before you lay on drie any more. This lute will be the stronger if you mixe therewith a quantity of Bull's blood very hot, blend it well with all the rest.

You may make very good Crucibles with the following Lute or Composition. Take equal parts of good Potters-earth dry'd, Stone-Allum, and false Talk, commonly call'd The Froz'n-stone, powder'd fine and well wrought together with a little Milk, and reduc'd to a consistency fit to make Crucibles; which when you have made, bake them in a Potter's Furnace among other Earth'n-pots.

If you would mend the holes and clefts in Earth'n or Glafs-Vessels, and make them as good as ever they were; Take the whites of new-laid Eggs and beat them in an

Earth'n

Earth'n-pan with small sticks, till they are nothing but froth. Let that scum stand still and stay till it be turn'd to a liquor; then mingle it in Quick-lime newly quench'd in a little Milk, and make a soft and close Paste to be spread upon a small piece of fine Linnen enough to cover the slit in the Vessel. Lay that upon the crack of the Vessel, having sprinkl'd the upper-part of the Linnen with Quick-lime very finely pulveris'd: at the same time lay on a new roll of equal bigness plaister'd with the same Paste upon the powder of Lime, and then powder the upper-part of the second Linnen-cloth with powder of Quick-lime again; then lay a third plaistering of the same Paste, with which you shall cover the upper part and sides of the last Linnen-roll, and then let it drie at leisure. This Lute, thus laid on, holds perfectly well, and prevents the cracks from going any farther. There are some that add Glasse finely beat'n to this Paste; some mixe therewith powder of Bricks or *Terra sigillata*. Which things may strength'n the Lute, and are not to be rejected.

You may also very properly apply to the cracks of the Vessels, Fish-glue dissolv'd in Spirit of Wine, and spread upon a little piece of a Pig's or Oxe's Bladder, and let it drie.

You may also make a Lute very firm, and lasting in the fire for cracks of Vessels, as also to plaister and cover them. This Lute is made with two parts of Minium in fine powder; and one part of that which they call the Fat of Herrings; these things ought to be well incorporated together and spread upon fine Linnen, and laid upon the crack of the Vessel.

To stop your Bottles well and so that no vapour may go out, dissolve Fish-glue in Spirit of Wine, and make of it a kind of Mucilage, and incorporate with it a certain quantity of the Flowers of Sulphur, and Mastick finely pulveriz'd, to which you may add Lime quench'd in Milk. These things must be well mix'd together, to plaister the mouth, as also the inside of the neck of the Bottle: which being drie, nothing never so subtle can pierce it.

There is a Lute common enough very good, which is made of equal parts of Minium, Ceruse of Venice, good Bole-Ammoniack and Gum Sandarack subtilly pulveriz'd, incorporated with Lineseed-Oyl and reduc'd into paste. The use whereof is much the same as of the preceding.

The *Hermetick* or Philosophical Seal, nam'd improperly Lute, is made use of for glass-Vessels, that contain some substance, of which you would preserve all the parts. Those Vessels ought to be somewhat long-neck'd, and strong enough to endure almost a Fusion, and yet not to suffer the matters therein contain'd to be alter'd. To accomplish this, you must bore the bottom of an Earth'n-pot able to resist fire, and cause the neck of the Vessel to enter underneath; then light a fire in the Pot round about the neck, and when it is near Fusion, with a pair of Tongs heated in the fire, squeeze it, and writh it so, that it may be so exactly joyn'd, that not the least vapour may get out.

Bottles also with short necks, strong and well-made, may be exactly stoppt with a stopple of Glasse, made fit and rubb'd round about with Emeril pulveriz'd, till they fill the hole of the bottle so exactly, that the vapours cannot find passage to get out. There is a way something like this, when, after you have stoppt the neck of the bottle with a Cork fit and short, and that there remains a void breathing-place, you fill it up with melted Sulphur, or some one of the Lutes which I have already describ'd, and cover the Lute with a double piece of Oxe's Bladder, moisten'd and strongly bound about the neck of the bottle. Mastic, Bole-ammoniac of the East, and Borax, finely powder'd with the liquor of the white of an Egg, will make a Lute very proper for this purpose, and for several other uses.

CHAP. LIII.

Of Instruments, or Vessels requisite, as well in the one as in the other Pharmacy.

THough I might have comprehended Furnaces in the Chapter of instruments, yet the skill requir'd to make them; together with their bigness, their diversity of Materials, deserv'd a particular Chapter. Under the name of Instrument are comprehended not only the Tools, or Utensils, which both *Pharmacists* make use of, but all the Vessels appointed to contain the substances to be prepar'd, which are prepar'd, and are to be preserv'd after preparation. The Materials of Instruments are various, according to the use, to which they are design'd. Gold and Silver may serve for the Materials of some, but their dearness makes them not so frequently in use. Other Metals are very much us'd, as red and yellow Copper, Pewter, Lead, Steel, common Iron forg'd and wrought, as also several Metals, and Metallicks melted alone, or mix'd together. Marble, Porphyrie, Sea-shells, divers Stones and Jewels, certain Horns, several Bones, divers Shells, as also the Eggs and Skins of some Animals; Woods, Roots of Trees, Shells of certain Fruits, Woollen and Linnen-Cloths, Silk, Hemp, Flax, Rind of Trees, Horse-hair, Ropes, Pack-thread, Paper; divers Earths, and Sands, Glasses, Chrystals, Bitumens; all these are instrumentally made use of by both *Pharmacists*, besides a thousand other things too tedious to repeat.

Several Vessels or Instruments are made of Copper or Latten; but those Vessels that are to contain such things, as are to be tak'n inwardly, must be Tinn'd, to prevent the Metals from imparting their bad qualities to them. The most usual are Basins, Cauldrons, Brass-pipes for the Mores head, for the Refrigeratory, for the Rose-water Limbecks, or for other heads of Limbecks, Stillatories for Spirit of Wine, with their Serpentine, and heads; Vessels for *Balneum Maria*, and evaporating Baths, Lamp-Furnaces with their appurtenances, Cucurbits, Chafers, Platters, Pofnets, Lamps, Funnels, Capsula's, Moulds, Ladles, Scummers, Spatula's, &c. Several Vessels of Pewter are us'd, as Basins, Platters, Dishes, Trencher-Plates, Cucurbits, Vessels for Digestion, heads or helms of Limbecks, plates of Iron, Pots, Syringes, Ladles, Measures, Lavers, Capsula's, Ewers, Bottles, Urns, Fountains, &c. Lead is very much us'd to make Instruments, as weights and boxes. Several Metals and Metallicks are us'd mix'd together, for great and small Mortars and Pestles, Roylers, Horns of Antimony, Moulds, Pipkins, burning-Mirrors, &c. Several Instruments of Iron and Steel, are us'd as well to contain the Matters, as for several uses; as for Boylers, Cauldrons, Capsula's, Mortars, Antimony-Horns, Pots, Crucibles, Plates of cast Iron, or beaten out, Frying-pans, Nippers, Pincers, great and small Tonges, Forks, Ladles, Hooks, Bars, Grates, Moulds, Trevents, Knives, Scissars, Hammers, Files, Rasps, Saws, Spatula's, Pestles, Funnels, Capsula's, Lamps, Conduits, Pipes, Rings, Irons bended round to cut off the neck of the Recipients, Compasses, &c. We use Jasper, Marble, Sea-shells, and divers hard Stones, upon which to bray several Minerals, and to pound some parts of Animals. We use them also for Mortars, Pestles, Cups, and several other Vessels appointed for several uses. We make an infinite sort of Vessels of Earth, as Crucibles, Cucurbits, Capsula's, Aladulls, Boylers, Pots, Covers, Pipkins, Plates, Dishes, Cups, Bottles, Pitchers, bending-Limbecks, Chaffers, and the like. Several Vessels are made of Chrystal, as Basins, Plates, Platters, Cups, Bottles, Vases, and Capsula's, &c. But a far greater quantity are made of Glas. For besides these that I have nam'd to be made of Chrystal, which may as well be made of Glas, we make thereof Limbeck-bells, Pelicans, and many other Vessels fit for Circulation, Vessels for Distillation, all of one piece, Matrasses with long Necks of several proportions and forms, Cornutes, Recipients of all sizes, some without a Pipe, some with one, two, or three Pipes; ordinary Cucurbits, others with a Pipe, or a freight neck, heads of Limbecks cover'd at the top, others uncover'd; others without a beak called blind Limbecks; Mortars, Pestles, Philosophers Eggs, Vessels to separate liquors, Pipes, Plates, Bibbers, Pots, Dishes, and an infinite sight of Vessels of all sorts and sizes.

We use Shells for cups, and to contain several Medicines. We make Capsula's, Spatula's,

tula's, Rowlers, and Pestles of Ivory, Cups, Bottles and Boxes, Ostridge-eggs. The same things are also made of Horn; Bags, budgets, and bottles are made of Leather. Several boxes of Tortoise-shell; cups, spoons, boxes, and little pixes of Amber, Jet, and Mother of Pearl. We make use of Wood, and the Roots of Trees for Casks, Bathing-tubs, Covers, Buckets, Mortars, Pestles, Rowlers, Cups, Spatula's, Boxes, Presses, Cupboards, &c.; We make use of Cloths for strainers, Hippocrates breeches, and long narrow bags for filtering.

We also use Cloth to cleanse the flowers of *Schistomachus*. We make bags and strainers of ordinary Linnen; we make our sieves of Linnen, Silk, and Horse-hair. We use Paper to filter several Liquors, to cover bottles, pots, and to wrap up several Medicines. In short, we make use of a thousand things, and a thousand inventions, for an infinite number of Vessels, and Instruments appointed for the use of *Pharmacy*, of the chief of which I will give you the Figure, as exact as well cut, as also of the Furnaces which I have describ'd.

CHAP. LIV.

Of the manner of Cutting Glass.

THE incompatibility between the extremity of heat and the extremity of cold, joyntly acting one against the other, and the oft'n breaking of Earth'n and Glass-vessels, which happen by the pouring any hot liquor into them when they are very cold, or any very cold liquor into them when they are very hot, has been the reason that several wary Artists have endeavour'd to remedie the exposing of their Vessels to these two combating qualities. Seeing therefore that they could make good advantage of these two opposites by cutting the necks and beaks of their Glass-vessels, they have made use of several ways to do it; of which I shall succinctly describe the most convenient and the most useful.

Diamonds or Emerill will serve to cut the superfluous parts of glass, when they are thin. But when you would cut off the necks of Recipients, which are usually very thick, you may scratch the place where you intend to cut, but you must make use of Fire and Water to perfect your design.

To which purpose you must make use of Iron-rings, about the bigness of your little finger, the handles whereof must be of the same metal, round and hollow well-nigh proportionable to the bigness of the neck of the Recipient which you intend to cut off. Heat the Ring red-hot in the Fire, and having put it over the neck of the Recipient, rest it upon that place which you intend to cut off; and when the glass is heated, pour some drops of cold Water upon it, and the neck will drop off just at that place where it was heated.

You may for the same purpose wind a wick of Sulphur round about that part of the neck which you would have cut off, and so order it that the flame may give an equal heat round about that part; and when the part is hot enough, pour, as before, some few drops upon it, and the neck will come off.

I have done the same thing oft-times with a wick dipt in Turpentine, by the means whereof, using it according to the method of the Sulphur-wick, I have cut off the necks of the biggest Recipients, as well as of the less; and of all sorts of Glass-bottles.

If that part of the neck of the Recipient be not hot enough, and that instead of separating quite, it only begins to break, you may perfect the work by resting the end of a red-hot Iron against the crack begun, and so going round with the same Iron, till the neck falls off.

CHAP. LV.

Of Weights, and Measures.

THE Physical-pound never consisted of more than twelve Ounces, taking twelve Ounces of the ordinary Pound of sixteen Ounces; and is usually known by this Character lb. The Physical Ounce is thus mark'd ℥ by the *Greeks*, who make it to consist of eight Drachms. They figure the Drachm like a figure of Three 3 containing three Scruples. The Scruple is thus mark'd ℥ , which consists of four and twenty Grains, being the third part of seventy two which a Drachm ought to weigh. The Grain is thus mark'd Gr. or thus g .

Sometimes the Physical-Pound is divided into two parts, and the Half is thus mark'd ℥ . Sometimes it is divided into four parts, which fourth part is call'd *Quartarium*, known by this abbreviation *Quart. j.* But most usually the Pound is divided into several Numbers of Ounces, which the *Physicians* specify in their Bills, rarely mentioning Half-pounds or Quarter-pounds. The mark that stands for Half a pound stands for Half an Ounce, Half a Drachm, Half a Scruple, being preceded by their several Marks.

Herbs, Flowers, and several Roots are not weigh'd in Vessels, they are only measured by *Fascicles*, *Manipules*, or *Pugiles*. *Fasciculus*, or a Bundle, contains as much as a Man can hold under one Arm bent to the upper part of the Hip, and is thus mark'd *Fasc.* *Manipulus*, is as much as a Man can grasp in his hand, thus character'd, *M. Pugillus*, is as much as a Man can grasp with three Fingers; and is known by this Character *Pug.*

CHAP. LVI.

Explaining several Physical Terms.

WHEN you find in any Receipt the five opening Roots prescribed, you must understand the Roots of Asparagus, Smallage, Parsley, Fennel and Butchers-Broom.

The usual Emollient-herbs are Mallows, Marsh-mallows, Bear-foot, Groundfil, Beets, Mercury, Violets, Arrach, Pellitorie of the Wall, and Lillies.

By the five Maiden-hairs, are meant *Adiantum album*, White-maiden-hair, *Adiantum nigrum* or common Maiden-hair, *English-maiden-hair*, Ceterack or Spleen-wort, and Wall-Rue: to which I may add Harts-tongue.

The three Cordial-flowers are Bugloss, Burrage and Violets; to which others add Gilly-flowers and Roses.

The four Carminatives, or Wind-dissolving Flowers, are Camomil, Melilot, Fetherfew and Dill-flowers.

The four great hot Seeds are, Anise, Fennel, Cumin and Caraway-seeds.

The four lesser cold Seeds are Parsley, Smallage, Ameos or Bishops-weed, and Daucus or Wild Carrot-seeds.

The four greater cold Seeds are Gourds, Citruls, Melons and Cucumbers.

The four lesser cold Seeds are Lettice, Purslane, Endive and Succorie.

The five precious Fragments are Jacinths, Emraulds, Saphyrs, Granates and Sardonyxes.

The four Cordial Waters are Burrage, Bugloss, Endive and Succorie.

Some add to these Meadow-sweet, Blessed-thistle, Devils-bit, Scabious, Water-Germander, Sorrel, Vipers-grass and Wood-sorrel.

The *Physicians* prescribe several Fruits by number, with this mark N°. or by pairs, mark'd thus *Par.*

When you find the word *Ana*, or the Character ā ā , it signifies of equal quantity.

By *f. a.* or *ex Arte*, is to be understood *According to Art.*

By *q. s.* is to be understood, *As much as is sufficient.*

And for that the *Apothecary* ought to be the Eye of the *Physician*, as well in the Preparation

paration of Remedies prescrib'd, as in the Administ'ring thereof. It is very necessary for him not only to understand whatever written or printed Receipts shall come to his hands, but also to know the proportion and Doses of every Medicine. To the end that in case any mistake should happ'n by the carelessness of the *Printer* or *Writer*, or that he should not be able to read some bad Hands, he may be able to judge both of the Doses and Ingredients, make them agree with the Rules of *Pharmacy*, and the approbation of judicious *Physicians*, and prevent the ill-accidents that may happ'n by false Preparation and Administration.

I did not think it necessary to insert here several things which may be found in several Authors; among the rest, the Catalogues of several Medicaments, which being only some part either of some Plant or Animal, are to be understood such as are to be preferr'd before the other parts, when the Plant or Animal is prescrib'd, without naming the particular part; as the Seeds of Annise and Fennel, Roots of Orrice and Jal-lap, Flowers of Violets and Roses, Fruits of Melons and Cowcumbers, Juices of the bending *Egyptian* Beantree, and the under-growth of Cistus; the Wood Santalum and Guaiacum, Gums Galbanum and Ammoniac; Rinds of Cinnamon and Cassia; and several other parts of Plants and Animals which are to be understood, when the Plant or Animal is prescrib'd. Such as are also Castoreum, Bezoar-stone, Musk and Civet, which are but parts or extrements; yet ought to be understood, when the Animals are prescrib'd. There are also Minerals, which being but *species* of themselves, yet for their excellency, retain the name of the *genus*. Such are *Lapis Lazuli*, which is to be understood under the word *Lapis*; Bay-salt, under the name of Salt; the Seal'd-earth of Lemnos, under the name of Seal'd-earth; the other Seal'd-earths with their additions, without which they would never be understood. They that are more curious may be better satisfy'd, by reading Authors, who have reckon'd up vast number of these things; though here be no great necessity of it, in regard that use and the Explanation that a Man shall meet with in the Composition, may suffice. You may also find in the same Authors Catalogues of succedaneous Remedies, which would be both tedious and troublesom to enumerate. I will only say this, That you must avoid as much as possible the use of substituted Medicines, not sparing for any cost to be furnish'd with the same Medicaments which are set down in the *Pharmacopæical* Compositions, or prescrib'd by the *Physicians*. And then when it is impossible to have all that the *Physician* prescribes, then must an *Apothecary* be careful not only to substitute Root for Root, Wood for Wood, Juice for Juice, Rind for Rind, Herb for Herb, Seed for Seed, Oyl for Oyl, Syrup for Syrup, &c. but also to have succedaneous or corresponding Medicaments near in vertue and quality, to those whose defect they are to supply.

The End of the First Part.

THE
Royal Pharmacopœia,
 CONTAINING
 GALENICAL PREPARATIONS
 AND
COMPOSITIONS.

THE SECOND PART.

The Order and Method of the Second Part.



VERY Apothecary, who well understands the Generalities contain'd in the First Part of this *Pharmacopœia*, may easily of himself undertake several Preparations, especially if he have attain'd the true knowledge of his Profession.

Nevertheless, I will not omit from time to time to give young beginners, those necessary directions that concern as well the particular knowledge of the principal Medicaments, that are put into Compositions, as their Preparation and just Mixture. But before I go any farther, I must advertise the Reader, once more, that there is not in this *Pharmacopœia*, any Receipt, nor description of any Composition, either Internal or External, which has not been prescrib'd by Monsieur *Aquin*, chief Physician to His Majesty, or which he has not taken the pains to examine very carefully, and very often corrected and reduc'd into a better regulation, than that wherein the Ancients had left it. He must also take notice, that instead of a great Number of certain Compositions which are now quite out of use, with which the most part of Dispensatories are pester'd, and which are more costly than profitable, he shall find in this Book, amongst the best of Compositions, and most in use, several descriptions of Remedies, as certain as full of curiosity, and which well deserve to be set down, and to be prepar'd and us'd. This *Galenic Pharmacopœia* shall be divided into two books; of which the first shall treat of Preparations, and Compositions Internal; and the second only of those which are accounted External. I will begin the first with the most simple Preparations or Compositions, especially those that cannot be kept any long time, and which may be suddenly prepar'd, and almost every foot; and from thence I shall proceed to those that are of greater consequence, and require more exactness, and whereof the Shops are wont to be still provided. I shall not make any stay upon certain things that require no great consideration, but apply my self to things of consequence, not omitting anything that may serve for the instruction and advantage of the Apothecary, for whose sake I have principally undertaken this work. I shall not contradict the judgement of the Ancient or Moderns;

derms; where I shall find their practice fit to be imitated: But I shall endeavour to find out something better, and more maintainable, where experience and reason will not otherwise be satisfy'd. Nevertheless, it shall not be said, that I take delight to blame any Person in particular, it not being my Honour to seek the raising of my Reputation by defaming others; being fully perswaded, that every Authour hath cordially written what he knew, and what he believ'd to be truth.

I might insert simple distill'd Waters among the *Gallicical Compositions*, but because they must be attended by several compound Waters, that require more skill, and that both the one and the other stand in great need of *Chymical Pharmacy*, I thought fit to reserve them for the Third part of this Work.

CONTAINING

THE
FIRST BOOK,
OF
INTERNAL PREPARATIONS,
AND
COMPOSITIONS.

CHAP. I.

Of Juices.

I Shall not here stay upon Juices or Liquors which may be drawn out of Animals, as Blood, Flegm, Urine, Serofities, Sweat, &c. Nor upon those which may be drawn from their parts by affation, pressing, or otherwise, as the Gravies, and Liquors of Meats, &c. Nor upon such as are to be drawn from the stock of Minerals, as Oyl of *Petroleum*, or *Naphta*, and several bituminous matters, but only upon the Juices of Plants.

The Juice is the same in Plants, as the blood in Animals: and it may be defin'd to be a liquid substance, which making a part of the composition of Plants, communicates to the rest of the parts, that which is necessary for their support, as also for their growth. This Juice issues out sometimes of it self, sometimes it is drawn forth by incision, or some other way more artful. This Juice is more or less liquid, according to the several concoctions which it has received from Nature, either in the Plant, or above or without the Plant. It is sometimes Watry, sometimes Winy, sometimes Oily, Gummy, Rosiny, Bituminous. It is also sometimes sweet, sometimes bitter, eager, sharp, insipid. And as sometimes it has no scent, sometimes it is odoriferous, sometimes it stinks, sometimes it is black, sometimes white, green, blew, yellow, red, &c. It is also more or less abounding, according to the Nature and condition of the Plant. Sometimes it is so inwardly united, and so profoundly conceal'd among the other substances, as not to be perceiv'd by the ordinary senses, nor be distinguish'd but by separating it by the means of fire. Such are the Juices or Liquors which issue from the dryer sort of Woods in Distillation, as also the Juices drawn from the Horns and bones of Animals, though seeming very dry. The Juice is also sometimes mix'd with

sub-

Substances so viscous, and tenacious, though soft, that it cannot be separated but by the means of fire. Nevertheless, these Juices are not to be taken barely and purely, for that part which I have called *Flegm*, and which I have acknowledged for one of the five principles, of which every mixt body ought to be compos'd; for sometimes they themselves are compos'd of some or other of the other principles, which is easie to prove by the separation which the Artist may make thereof.

In which respect, I am not of the opinion of those that make the Juices, which issue out of Plants of themselves, to be Excrements. For then the most essential part of the Plant would be taken for an Excrement; and if it were an Excrement, it ought to be rejected. And yet we gather very carefully, purchase very dear, and use to good advantage these pretended Excrements, as Myrrh, Bdellium, Tacamahacca, Storax, Benjamin, Natural-balsom, and several others which the Plants throw out of their barks, and which cannot but be accounted the best part of their composition. But how of those Juices that are to be prepar'd, and depend upon the skill of the Apothecary.

These Juices are drawn almost from all parts of the Plants; some by cutting the bark, to be afterwards dry'd in the Sun, as are the Juices of Scammony, Aloes and Poppy: Others by bruising and pressing. Thus as well Oyls as Aqueous Juices, are drawn from several Herbs and several Flowers; several Fruits and several Seeds. Such are the Juices of Carduus, Endive, Succorie, Burrage, Bugloss, &c. for Herbs. The Juices of Roses, Violets, Peach-flowers, red Poppies, &c. for Flowers. The Juices of Mulberries, Apples, Cherries, red Goose-berries, Barberries, &c. for Wine-Fruits. The Juices of Olives, Walnuts, Small-nuts, Almonds, Pine-apples, Pistaches, &c. for Oily Fruits. The Juices of the four greater cold Seeds, as also from the Seeds of Poppies, Danewort, Henbane, Marjoram, &c. for Oily Seeds. The other Juices are drawn by the addition of some Liquor, which cannot be avoided when the parts of the Plant are dry by accident, or that they have not moisture enough in themselves. Such are the Juices of Senna, Rhubarb, Angelica, Liquorice, Hellebore, &c. which are drawn forth by the addition of Liquor, and which being filter'd, are evaporated over a small fire; to the consistency of an Extract, of which they bear the name, and of which I shall speak in the Third Part of this *Pharmacopœa*.

Generally we bruise in a Marble-Mortar, or made of some hard-stone, with a Pestle of Wood, the Herbs, the Flowers, the Fruits, the Seeds, out of which we intend to draw the Juice, and then put them into a strong Cloth, or Bag, and squeeze out the Juice, either with your hands, or in a Press between two flat-pieces of Tin, Iron, or Wood. Then we let the Juice stand for some days, or else we expose it some days to the Sun; and then we pour out the clearest softly by inclination; and keep it so, or else strain it through *Hippocrates* breeches; or through some cloth-strainer, if the Juice be not clear enough, or if it be aqueous. The Juices of Herbs which are to be first made use of, or which ought to be clarify'd and boil'd with Sugar, or honey, or to be mingl'd and boil'd with Oynments, and Emplaisters, have no need of all this care. But the Wine-Juices of Fruits must be well-clarify'd. For they must first be expos'd to the Sun, then strain'd, to the end that by that heat and digestion, and by that straining the grosser parts of the Juice may be separated from the pure. These Juices are to be run through a bag, or rather through brown-paper, and they may be boil'd up with Sugar or honey, or be kept in bottles fill'd up within a small matter of the top; which vacancy must be fill'd with Oyl of sweet Almonds, to hinder the air from getting in and putrifying the Juice. However, after that, be careful to stop the bottles well, and to keep them in a place moderately cool, to make use of as occasion serves: At which time pour away the Oyl, and make use of the pure Juice, throwing away the feces. The Juices of Roses, and Peach-flowers, require the same care as the Wine-Juices.

Take notice that in drawing forth Acid red Juices, particularly that of Granates, you must do it in Glass Vessels, or Gally-pots, or of glaz'd Earth, have your hands very clean, and take an especial care that no Iron come near it, for fear of spoiling the colour. The Juice and also the Syrup of Kermes require the same care, for they lose their colour in Vessels of Iron or Copper.

To draw forth the Juice of certain viscous Plants, such as are Purslain, Burrage, Bugloss, and the like, the best way which I have found, is to put them whole into a Copper-Bason, tinn'd within, over a moderate Charcoal-fire, and there to keep them, stirring them from time to time, till some part of the Juice be got together at the bottom of the Bason. Then separate this Juice by inclination; and set the Bason again upon the fire, and continue to keep it there and to stir the herbs, and to separate the Juice

by

by inclination, till you have Juice enough. By this means you will have less trouble, have sooner done, and the Juice shall be much more pure, then by bruising the Herbs. I refer the Oylie-juices of Fruits and Seeds till I come to speak of Squeez'd-oyle.

CHAP. II.

Of Infusions, and Decoctions.

I Thought it best to discourse of Infusions and Decoctions immediately after Juices, by means whereof the more succulent and essential parts of Medicaments are imparted to the Liquors. Besides, Decoctions and Infusions are made use of in so many *Galenical* Compositions, that I deem'd it convenient to give some general Rules, before I go any farther. They are sometimes made use of to soft'n and boyl Medicaments, and sometimes to take away or correct some bad quality: but their chiefest use is to communicate their Vertue to some Liquor, and to unite and assemble in one Liquor the Vertue of several Medicaments joyn'd together.

Infusions differ from Decoctions in degree of heat, and time in boyling. For Infusions are oft-times made without fire: and when there is any need of it, it must be very moderate, and require a long time; sometimes for several hours, sometimes for several days. Whereas Decoctions are at an end in a quarter, half, or a whole hour, and that the longest seldom exceed five or six hours. I have joyn'd these two Preparations together, by reason of the great affinity which they have one with another; and for that many times Infusions precede Decoctions.

Decoctions differ according to the Substance of the Mixt-body which you are to boyl. For such Mixt-bodies as are of a compact substance and hard to penetrate, require a longer boyling, then they that are of a middling substance; and these again require more boyling then those that are of a tender substance. The same diversity of Substances requires also less or more Liquor. For there must be more for Medicaments that require long boyling, then for those that require less: For a long Decoction requires much moisture. The ordinary proportion is six times the weight of Liquor to the Substance boyl'd. But if the matters be of a compacted substance, you may make use of eight, nine or ten times the weight in Liquor. And if the Substances are very solid indeed, you may advance to twelve or sixteen times the weight of Liquor. You must also take notice that Medicaments of a compact Substance will endure a more violent fire and longer boyling then those of a middling or a tender Substance: and some there are which are not put into the Decoction, till you are ready to take it off the fire. Others there are which have only need of a bare Infusion to communicate their Vertue to the Liquor. So that it is absolutely necessary for an *Apothecary* to know the various Substances of Medicaments, to judge by that how he ought to regulate their Infusion or Decoction; because that Prescriptions never mention the regulation of the Decoction, nor the degrees of fire, nor the length of time requisite for the Decoction, which is all left to the prudence of the *Apothecary*.

And now to proceed in order; When you are to make a Decoction of several Medicaments, you must begin with the most solid, such as are Woods, then put in Roots and Barks, after that Fruits; next to them Herbs, Berries and Seeds; Flowers must be reserv'd to the last. You must rasp, or bruise or cut very small the Woods, Roots and Barks, slit the Fruits, chop the Herbs, and bruise the Berries and Seeds, and put in the Flowers as they are.

This Rule however is not so general but that it may have its exception. For a wood of a thin and spungie Substance requir's less boyling then a wood more close and solid. Barley whole endures as much boyling as wood. On the other side Aromatic-roots and woods will not endure long boyling; but the better parts will dissipate. Barks, Fruits and Aromatic-seeds, require only a bare Infusion. Liquorice-root is put in after the Herbs. The Maiden-hairs, or Capillaries, at the same time with the Liquorice or immediately after. The Cold-seeds at the same time as the Flowers. The Flowers of the Water-Lilly endure as much boyling as the Herbs.

You must observe the same order in the Decoctions of Animals; for the Horns and Bones require longer boyling then the Flesh. Beef requires more boyling then Mutton, Mutton then Veal or Capon, and both more then young Pullet.

These

These general Rules will be much more demonstrable in the progress of these Discourses. And though the various examples of Decoction which you will meet with, might suffice, I will not omit to give you here certain Examples, which will serve for certain Decoctions, which have been prescribed without putting down the Medicaments of which they ought to be compos'd.

A Cordial Decoction.

<i>Rx. Hordei integri,</i>		<i>Rx. Whole Barley,</i>	
<i>Radicum Scorzoneræ,</i>		<i>Roots of Vipers-grass,</i>	
<i>Borraginis,</i>		<i>Borage,</i>	
<i>Bugloss. ana.</i>	3j.	<i>Bugloss, ana.</i>	3j.
<i>Foliorum earundem Plantarum</i>		<i>Of the Leaves of the same Plants,</i>	
<i>Endivia,</i>		<i>Endive,</i>	
<i>Cichorei,</i>		<i>Succorie,</i>	
<i>Oxytriphylly, an.</i>	M. j.	<i>Wood-Sorrel, an.</i>	M. j.
<i>Capilli Veneris Montpelienfis,</i>	M. s.	<i>Maidenhair of Montpellier,</i>	M. s.
<i>Liquoritia rasa,</i>	3 ij.	<i>Liquorice slic'd,</i>	3 ij.
<i>Quatuor Seminum Frigid. maj. mundat.</i>		<i>The four greater Cold Seeds cleans'd,</i>	
<i>ana.</i>	3 s.	<i>ana.</i>	3 s.
<i>Trium Florum cordialium, ana.</i>	Pug. s.	<i>The three Cordial Flowers, ana.</i>	Pug. s.
<i>Fiat ex Arte decoctum in lb sex aqua fontana ad tertia partis consumptionem.</i>		<i>Make a Decoction according to Art in six pints of Fountain-water, till the third part be consum'd</i>	

Wash the Barley and boyl it a good quarter of an hour in the water, then put in the Roots; which must be well wash'd, the pith tak'n out, and the out-side par'd off, and then slic'd. Boyl them with the Barley a good quarter of an hour, then put in the leaves of the Viper-grass, Burrage, Bugloss, Endive and Succorie, well wash'd and cut. After you have boyl'd them a small quarter of an hour, with all the rest; add the Liquorice scrap'd and slic'd, the Wood-Sorrel, and the Venus-hair slightly cut; let them boyl a little, then put in the cold Seeds well-bruis'd and the cordial Flowers, and having plung'd them into the Decoction, take the Possel from off the fire, and strain the Liquor through Hippocrates's Breeches or a Wooll'n-cloth, when it is half-cold.

A Pectoral Decoction.

<i>Rx. Hordei mundati,</i>	3 s.	<i>Rx. Cleans'd Barley,</i>	3 s.
<i>Jujubarum,</i>		<i>Jujubs,</i>	
<i>Sebesten. an.</i>	Nº. xij.	<i>Sebestens, an.</i>	Nº. xij.
<i>Passularum ab acinis purgatarum,</i>	3 vj.	<i>Raisins of the Sun ston'd,</i>	3 vj.
<i>Ficus pingues,</i>		<i>Fat Figs,</i>	
<i>Dactylos enucleatos, an.</i>	Nº. vj.	<i>Ston'd Dates, an.</i>	Nº. vj.
<i>Foliorum Scabiosæ,</i>		<i>Of the Leaves of Scabious,</i>	
<i>Pulmonaria, an.</i>	M. j.	<i>Lung-wort, an.</i>	M. i.
<i>Hyssopi,</i>		<i>Hyssop,</i>	
<i>Polytrichii,</i>		<i>Gold'n-Maidenhair,</i>	
<i>Florum Tussilaginis, an.</i>	P. j.	<i>Flowers of Coltsfoot, an.</i>	P. j.
<i>Glycyrrhizæ,</i>	3 ij.	<i>Liquorice,</i>	3 ij.

Make a Decoction in four pints of Fountain-water to the consumption of the third part. Boyl the Barley a good quarter of an hour in the Water, then put in the Dates, the Raisins of the Sun, the Figs, the Jujubs and the Sebestens slic'd. Boyl all these Fruits with the Barley for another quarter of an hour; then put in the Scabious, Lung-wort and Hyssop cut: boyl them another quarter of an hour; after which, put in the Liquorice scrap'd and slic'd, the Golden-Maidenhair, and the Flowers of Coltsfoot; give them a little boyling, and then take them off from the fire, and strain the Decoction, when it is half cold.

An Opening Hepatic Decoction.

<i>R. Radicum quinque aperientium,</i>			<i>R. Of the five Opening Roots,</i>	
<i>Fragaria,</i>			Strawberrie-roots,	
<i>Bugloss. an.</i>	3 vj.		Bugloss-roots, <i>an.</i>	3 vj.
<i>Foliorum Endivie,</i>			Leaves of Endive,	
<i>Cichorei,</i>			Succorie,	
<i>Lupuli,</i>			Hopps,	
<i>Agrimonia,</i>			Agrimonie,	
<i>Pimpinella,</i>			Pimpernel,	
<i>Cerefolii,</i>			Chervil,	
<i>Taraxaci, an.</i>	M. j.		Dandelyon, <i>an.</i>	M. j.
<i>Capilli Veneris Monspel.</i>			Venus Maidenhair of Mompelier,	
<i>Polytrici, an.</i>	M. ß.		Golden-Maidenhair, <i>an.</i>	M. ß.
<i>Seminis Apis,</i>			Seeds of Parsley,	
<i>Milii Solis, an.</i>	3 ij.		Gromel, <i>an.</i>	3 ij.
<i>Semin. quatuor frig. Maj. mund. an.</i>	3j.		The 4 bigger cold Seeds cleans'd, <i>an.</i>	3j.
<i>Glycyrrhiza,</i>	3 ij.		Liquorice,	3 ij.
<i>Florum Buglossi,</i>			Flowers of Bugloss,	
<i>Borraginis,</i>			Borrage,	
<i>Genista, an.</i>	Pug. j.		Broom, <i>an.</i>	Pug. j.

Make a Decoction according to Art in ℥ viij. of Fountain-water, to the consumption of the third part.

Wash the Roots well, take out the pith and scrape their outsides, and having bruised and sliced them, let them boyl half an hour in the Water. Then take the Hopps, the Endive, Succorie, Agrimonie, Dandelyon, Pimpernel and Chervil shred, and let them boyl about a quarter of an hour with the Roots. Then add the Seeds of Parsley and Gromel stamp'd, and having let them boyl never so little, put in the Liquorice sliced and bruised, and presently after the cold Seeds bruised and the Flowers; put them down into the Decoction, and at the same time take it off, and strain it when it is half cold.

A Cephalic Decoction.

<i>R. Radicum Valeriana majoris,</i>		<i>R. Roots of the bigger Valerian,</i>	
<i>Icreos Florentina,</i>		Florence Orrice,	
<i>Paonia maris,</i>		Male-Peonie,	
<i>Acori veri,</i>		The true Aromatical Reed,	
<i>Visci Quercini, an.</i>	3 ß.	Mulleto of the Oak, <i>an.</i>	3 ß.
<i>Foliorum Betonica,</i>		Flowers of Betony,	
<i>Salvia,</i>		Sage,	
<i>Majorana,</i>		Marjoram,	
<i>Calamintha Montana,</i>		Mountain-Calamint,	
<i>Chamadryos, an.</i>	M. j.	Germander, <i>an.</i>	M. j.
<i>Seminum Ruta,</i>		Seeds of Rue,	
<i>Paonia maris,</i>		Male-Peonie,	
<i>Baccarum Juniperi, an.</i>	3 ij.	Juniper-Berries, <i>an.</i>	3 ij.
<i>Florum Rosismarini,</i>		Flowers of Rosemary,	
<i>Stoechados,</i>		Calidonie,	
<i>Lavendula,</i>		Lavender,	
<i>Calendula,</i>		Marigolds,	
<i>Lillii Convallium, an.</i>	P. j.	Lillies of the Vallies, <i>an.</i>	P. j.
<i>Tartari crudi,</i>	3j.	Raw-Tartar,	3j.

Make a Decoction according to Art in ℥ vj. of Fountain-water to the consumption of the fourth part.

The Raw-Tartar is prescribed in this Decoction, as well to communicate to the Water the vertue of the Medicaments therein prescribed, as to retain in some sort their volatile parts; and to prevent dissipation during the Decoction. And though I do not contradict the opinion of those that would avoid boiling the parts of Aromatic Plants, especially in uncovered Vessels; nevertheless I believe we may yet allow something to the

the ancient Customs, provided there be requisite care tak'n. The Roots of Peonie, Valerian, Orrice and Acorus are to be well bruise'd, as also the Mistletoe of the Oak, and the raw Tartar, and then put into an Earthen glaz'd pot, with the quantity of water prescrib'd: and having cover'd the pot, boyl the Decoction over a gentle fire, during a small quarter of an hour; then put in the cut Herbs, and covering the pot, let them boila quarter of an hour longer: then put in the berries and seeds, and cover the pot again, and after having given them four or five wambles more, put down the flowers into the Decoction, cover the pot, and take it off from the fire; and when it is half cold, strain it gently from the sediment.

CHAP. III.

Of Juleps, and Apozems.

I Shall not go about here to set down the Juleps of Roses, and Violets of the Ancients, nor any other of the same Nature, as being now out of use; their consistency and name being now chang'd into those of Syrups. I shall only say that the name of Julep has been formerly given to certain liquid compositions, made with distill'd Waters, or slight Decoctions, which are boil'd with Sugar, to a consistency much thinner then that of Syrups: For they had no design to keep them, but prepar'd them as they had occasion. The name of Julep is still now-a-days giv'n to certain Remedies, which have some agreement with the Juleps of the Ancients; but they are less sweetn'd with Sugar, and less fit to keep: For usually they never put above an ounce of Sugar, or an ounce and a half of some Syrups, to six or eight ounces of some distill'd Waters, of some decoction, or some other Liquor. We never boil these Liquors with the Sugar or Syrups, but only mingle them together when they are to be given to the patient, who may drink them as their ordinary drink, abating some thing of the quantity of Sugar and Syrups mix'd therewith. All these Juleps may be made tart with Spirits or Acid Juices. But they will not keep above twenty-four hours in the Summer in a cool place, and not above two or three days in the Winter.

Apozems are Medicines very near the Nature of Juleps: But they admit of a greater Number of Medicaments, which render them less pleasing. They are seldom compos'd of any thing but the Decoctions of the various parts of plants. And hence it is, that they have deriv'd their Name. For the Greek word *Ἀποζύμη*, signifies to boil, from whence *ἀποζύμη*, *Decoctum*, or, a thing boil'd. I could insert here several Examples, but I refer the Reader to the Decoctions of the preceding Chapter, which may be call'd Apozems. We may add purgative Medicines to these Decoctions, and dissolve therein several Syrups, as they are intended for this or t'other Disease.

CHAP. IV.

Of Emulsions and Almond-Milks.

Emulsions are liquid Medicines very pleasing to the taste, whose colour and consistency is very like to that of Milk. They are usually compos'd of Seeds, or Oily Fruits, beat'n in a Marble-Mortar, with a Woodd'n-pestle, and then dissolv'd in distill'd Waters, or in slight Decoctions, which you must strain and press out, and sweeten with Sugar or Syrups.

Emulsions are prepar'd for several purposes, especially to temper the excessive heat of the Lungs, and of all the Brest; to take off the sharpness and acrimony of the humours, and to assuage the boiling of the Blood, the heat of the Urine, and the Reins. For which reason they are us'd not only in stoppages of the Urine, and in Gonorrhea's, but also in Inflammations of the Natural parts of those that are troubl'd with Venereal Distempers. They are also successsfully us'd to temper the excessive heat of the Entrails, and to provoke sleep and rest. Emulsions are also very proper to sweet'n the Acrimony of the Humours in Dysenteries, to assuage pains, and heal Excoriations. Of all which

things it will be convenient to give some examples; and first, for the Distempers of the Lungs, and Brest.

℞ *Amygdal. dulcium mund.*
Semenum 4. frig. maj. Mundat.
Bombaxis, an.

℥j.

3ij.

℞ Sweet Almonds cleans'd,
 The four greater cold Seeds cleans'd,
Bombax, an.

℥j.

3ij.

Contundantur in Mortareo Marmoreo Pestillo Ligneo, sensim affundendo, aqua Tussilaginis, Scabiosa, Papaveris, Rhæados, vel decocti hordei, Passularum Mundat. & Liguoritia, lbj. β. Colentur & Exprimantur. Expressioni adde Syr. Violar. et Capill. Veneris, an. ℥j. β. fiat emulsio pro tribus dosibus, longe a pastu sumend.

Bruise these in a Marble-Mortar, with a Woodd'n Pestle, pouring by little and little upon them, Colts-foot, Scabious, wild Poppy-water, or decoction of Barley, Ston'd-Raisins, and Liquorice, lbj. β. strain and press them out. To the liquor press forth, add Syrup of Violets and Venus-hair, an. ℥j. β. Make an emulsion for three doses to be taken a good distance before or after Meals.

If Acrimony of humours, boiling of the blood, want of rest and sleep, accompany Diseases of the Lungs and brest, you may add to the Emulsions two drams of white Poppy-seed, and as much Lettice-seed, and change the Syrup of Violets, and Venus-hair into those of White-poppy and Water-Lillies.

And if you would prepare Emulsions against the heat and difficulties of Urine, whether caus'd by strange substances contain'd in the Reins, or in the Ureters, or in the bladder, or through any ill temper of the parts, or through any Venereal Malignity: then observe what follows.

℞. *Semenum 4. frig. maj. mundat,*
Malis solis
Papav. Alb. an.

3ij.

Contundantur in Marmoreo Mortareo, sensim affundendo, Decocti Radicum Althea et Nymphaeae, lbj. β. Colentur & Exprimantur: Expressioni adde Syrupi de Althea & Nymphaeae, an. ℥j. β. Salis Prunel. 3ij. fiant tres doses longe a pastu exhibend.

℞. Of the four greater cold seeds cleans'd,
 Gromel and
 White-Poppy-seed, an.

3ij.

Bruise them in a Marble-Mortar with a woodd'n-pestle, pouring by little and little upon them, a pint and a half of the decoction of the Roots of Marsh-mallows and Water-Lillies: strain and press them, add to the straining Syrup of Mallows, and Water-Lillies, an. ℥j. β. Sal-prunella, 3ij. Make three doses, to be given a good while before or after Meals.

Emulsions against the Dysenterie may be thus prepar'd.

℞. *Amygdal. dulc. excorticatarum,*
Semenum Sumach,
Lactuca,
Papaveris Alb.
Cydoniorum, an

℥j.

3ij.

Contundantur in Mortareo Marmoreo, sensim affundendo, decoct. hordei mundat. Portulacae & Veronica, vel aqua. Plantaginis, Rosarum, & Veronica, lbj. β. Colentur & Exprimantur: Expressioni adde Syrup. Cydoniorum & Papaveris Albi, an. ℥j. β. fiant tres doses horis commodis offerenda.

℞. Sweet Almonds blanch'd,
 Seeds of Sumach,
 Lettice,
 White-Poppy,
 Quinces, an.

℥j.

3ij.

Bruise all these in a Marble-Mortar, pouring upon them by degrees one pint β of the Decoction of cleans'd Barley, Purslain, and Speed-well, or of the waters of Plantain, Roses, and Speed-well. Strain and press them: To the straining add Syrup of Quinces and white-Poppy, ℥j. β make three doses to be tak'n at convenient hours.

The Following Emulsions are proper to kill Worms.

R. Nucleorum Persicorum Excorticatarum,
 3 ℥
Seminum Citri,
Portulaca,
Contra vermes, an. 3 ij.

Contundantur in Mortareo Marmoreo, sensim affundendo aquarum stillatiarum Naphae & Portulacae, an. 3 vj. vel decocti Radicis Graminis, & Rasura Cornu-cervi, ℔ j. Colentur & Exprimantur, Expressioni adde Syrupi de Limonibus, 3 ij. fiant duae vel tres, vel quatuor Emulsionis doses, longe a pastu sumend. Melius succedent, si Luna decursu exhibeantur.

R. Of the Kernels of Peaches, the Husks
 tak'n off, 3 ℥
Seeds of Citron,
Purslain,
Wormseed, an. 3 ij.

Bruise them in a Marble-Mortar, pouring upon them by degrees, of the distill'd waters of Orange-flowers, and Purslain, an. 3 vj. or of the Decoction of the Roots of Grass, and shavings of Harts-horn, ℔ j. strain and press them out. To the straining add Syrup of Lemons, 3 ij. make two or three, or four Doses of Emulsion, to be tak'n at a good distance from Meals. They will do better being taken in the Wane of the Moon.

Almond-Milks, Butters are easie to make; known to, and made use of by several Ladies, that regard their health, and to keep themselves plump.

The usual way is to prepare them of two ounces of blanch'd-Almonds, which must be stamp'd exactly in a Marble-Mortar with a Woodd'n-Pestle, afterwards dissolv'd in eight or ten ounces of the decoction of barley cleans'd, or in the Water where Veal or Pullets have been boyl'd. Then strain and press the whole, and add to the straining an ounce of fine Sugar, and never so little Rose-water, or if you please, Orange-flower-water. You may add an ounce of Syrup of Violets, Water-Lillies, or White-poppy instead of Sugar if there be occasion.

CHAP. V.

Of Potions, Mixtures, and Bolus's.

POtions are so call'd, because they are to be drank. The Materials of them are very various, by reason of the different Indications, Judgements, and insight of them that prescribe them; for that may be call'd a Potion which is as ill prepar'd, as that which is well prescrib'd, and as well prepar'd. Besides Purgative-Potions are as well to be accompted potions, as those which are accompted Astringent or Cordial, Sudorific, or Diuretic, &c. As Potions are not made without liquors; those which are made use of are sometimes simple, as fair Water, Wine, Milk, Whey, &c. and sometimes waters distill'd, Infusions, Tinctures, Decoctions, Juices, &c. Sometimes several liquors are mingled, one among another. Sometimes also to these liquors are added Powders, Salts, Opiates, Confections, Magisteries, Elixirs, Oyls, Essences, &c. Juleps, Apozems, Emulsions, Almond-Milks, and Diets, may be call'd Potions as well as Medicines. We also prepare Potions Emetick, Diaphoretic, Pectoral, Cephalic, Somniferous, Anodynes, Aperitives, Diuretics, Cordials, Stomachical, Hepatical, Splenetic, Hysteric, Vulnerary, Arthritick, Carminative, Dysenteric, and for several other purposes: So that Potions may be made after a thousand fashions for every Disease, since we may make use of various Remedies and different Doses according to the intention of the Physician.

That which many modern Physicians call *Mixture*, may be reckon'd in the same rank with Potions. But Mixtures differ in this from Potions, that their use is more frequent and longer, and because there is not so much drank of them at a time; for being compos'd of powerful Medicines, they operate in less quantity, and work those effects by repetition, which could hardly be done at once taking. These Mixtures are usually a mixture of distill'd Waters, more or less, compounded of Elixirs, distill'd Oyls, volatile, fix'd, or Essential Salts, Spirits, Tinctures, Essences, Extracts, pretious Stones, Syrup,

Syrups, and many other Remedies, well-chosen, and well-proportion'd in their Doses, which are to be taken from time to time in a little Spoon, in the Intervals between the Patients meals.

The difference of Mixtures may be very great, according to the diversity and complication of Diseases, and the Judgement of the Physicians, that prescribe them. Mixtures are also sometimes made of a more thick consistency, not much unlike that of ordinary Opiates, which is for the accommodation of such Patients, as cannot take Remedies in Drink. These Medicines may be compos'd of the same Medicaments made use of in the preceding mixtures, excepting the Liquors, instead whereof we put Conserves or Confections: They are given upon the point of a Knife, or wrapt up in Wafers, or otherwise.

Bolus's are internal Remedies, usually a little more solid then Opiates; invented meetly for the benefit of such Patients as cannot indure to swallow liquid drinks, or cannot away with their scent or taste. They are also profitable to make the best advantage for the swallowing of certain Medicines, whose weight would keep them always at the bottom of the Glass, were they mingl'd in liquor, as in several preparations of Mercury and Antimony: There may be as much diversity in Bolus's, as in Potions. They make them of Electuaries, Confections, Conserves, Pulps, Powders, Salts, Oyls, Essences, Extracts, Syrups, and an infinite sort of Medicines, of which there must be some that are solid and dry enough to thicken those that are too liquid, or too soft. Bolus's are taken usually a good while before meals, sometimes upon the point of a Knife, but generally wrapt up in Wafers, powder'd Sugar, or powder of Liquorice, Fruits roasted or raw, or some confection, or other substance that prevents the Bolus from being either smelt or tasted.

CHAP. VI.

Of Gargarismes, Masticatories, and Errhines, or Tents to put up into the Nostrils.

Gargarisms, are liquid Medicines, design'd for Diseases of the Throat, Mouth, Palate, and Gums, as also to free the Head from excessive moisture. They are usually compos'd of distill'd waters or decoctions, wherein they mix sometimes Salts, sometimes Spirits, Syrups, Honeys, Vinegar, and sometimes several Juices. Gargarisms are never swallow'd, but only gargl'd and held for some time in the mouth, then spit out again, continuing the use thereof as long and as often as necessity requires. These Gargarisms are as well known, and as usual as any other sort of Medicine, and there are enough to be found in several Authours, to spare the swelling of these Sheets.

Masticatories, are also call'd Apophlegmatismes, because their chief work is to bring down slegm from the Brain. For which purpose we make use of several simple Drugs, and particularly of divers parts of Plants, as roots of Orrice, Pellitory of Spain, Cyperus, or English Galenga, true Acorus, or Aromatic-reed, Grains of Stave-acre, Cubebs, Cardamom, all the Peppers, Mustard, Rocket, Sage, Rosemary, Mastick, Time, Savory, Tobacco, &c. which Medicines being chaw'd, by their heat and acrimony have a peculiar qualicie to draw down slegm from the Brain, and to void it by the mouth. Trochisques may be also made thereof by pulverizing them, and incorporating them with Oxymel, or Syrup of Cassidony, to hold in the mouth, and to masticate when they are dry: or else to make thereof a kind of paste, to tye up in a Linnen-Cloth like a knot and so to champ them between the teeth.

Errhines are so call'd, as being Medicines design'd to be put up into the Nostrils. They were invented for the same use as Apophlegmatismes. But they operate with more force, because they carry their vertue directly to the Brain, through the Conduits of the Nostrils, and powerfully stir up and move the Expulsive faculty. Errhines are sometimes liquid, and proper to be snufft up through the Nostrils; sometimes in Powder, to be either snufft up, or blown into the Nostrils; sometimes like a thin Oyntment, and sometimes like a Tent small at one end. Liquid Errhines are usually made of the Juices of Marjoram, Betony, Sage, Roots of Beets, Sow-bread, Orrice, &c. Or of the

the Decoctions of the same Plants, or of Lettice, or Lillies of the Valleys. The Powders are made of Marjoram, Betony, Orrice, Nicotian, Oleander, Colts-foot, white-Elleboore, and Euphorbium, upon some extraordinary accounts: Those that are made up in Liniments will admit the same things into their compositions; and must be incorporated with Oyl of Roses or Orrice, and a little wax, or with Oyl of Laurel. The more solid Errhines are chiefly to stop bleeding at the Nose: They are usually compos'd of Balaufts, or the Flowers of the wild-Pomgranate-tree, of Bole of the East, *Terra sigillata*, Mastick, and Man's-blood or Swines-blood dry'd; or of some such kind of astringent Medicaments pulveriz'd, and incorporated with the white of an Egg or Down of a Hare, to make Tents thereof to be put up and held in the Nose. Some there are that make an addition of white-Vitriol.

CHAP. VII.

Of Injections, and Pessaries.

Injections are liquid Medicines sometimes injected into the private parts of Nature, and sometimes into wounds: Clysters may be also call'd injections. The ingredients are different, according to the difference of the Distemper. Wine, Distill'd-waters, Lime-waters, Sea-waters, Spirit of Wine, Milk, Whey, Oyls, Balsoms, and several other Liquors; as also several Juices, and divers Decoctions and Infusions of several parts of Plants, and several Minerals. Usually Syringes are made use of for the application of these Injections, and they must be always warm'd before they be us'd. Sometimes several Ingredients and Preparations are dissolv'd in these Liquors, as Salts, Powders, Extracts, Syrups, Honeys, Trochisques, Gums, Elixirs, and several other things, according as necessity requires. Sometimes also we dip Tents, Feathers and Bolsters into Injections for the cure of Wounds.

Under the name of Pessaries, are comprehended all Medicines not liquid, which are put up into the Secret-parts of Women. But by the word *Pessary*, strictly tak'n, is to be understood a sort of solid Medicine, about a fingers length, sometimes somewhat bigger, which is put up into the Secret-parts with a Riband fasten'd to one end. These Pessaries are made pyramidical, round, close and smooth, for fear of hurting the parts. These Remedies are prepar'd for several purposes; the chief of which are to provoke the *menstruum's*, or to stop them: to hinder the falling down of the *Matrix*, to cure Fluxes against Nature, or to heal Ulcers, or other mischiefs that may happ'n to those parts. The Body of the Pessary is made of some slight polish'd-wood, or some piece of Linnen made up close and hard; cover'd with a kind of Sheath of Velvet, or some other Silk-stuff, the seams whereof cannot hurt. Then fill the Velvet with Cotton or Wool, that it may be as hard as if it were of Wood or Cork; and daub all the outside of the Pessary with some Liniment, or some other mixture proper for your purpose. Pessaries may be also made of Lead, hollow like a little Cane, and cover'd with Velvet, like the former. In all which there must be a difference observ'd between Maids and Women; as well in reference to the hardness, as the bigness of Pessaries, appropriating the lesser and softer to the first.

Aromatics that are sweet and free from acrimonie are very proper to render Pessaries effectual: whether it be to consume the vapours of the *Matrix*, or to op'n the passages, and to provoke the *menstruums*: For we observe that good Smells seem to comfort that part. For which reason such Liniments where Musk, Ambergrise, Civet, and other good Smells are mix'd, are successfully us'd upon those occasions. Though you must be very careful not to let them come near the Noses of some Persons, upon whom those Sweet-smells would work a contrary effect. The Bodies of Pessaries prepar'd to stop the *menstruum's*, are made up with astringent powders, very finely pulveriz'd, incorporated with Wax and Oyl of Mastick melted together, fill'd into some piece of thin Taffaty, and anointed without-side with the same Oyl. These Pessary's are very good to stop extraordinary losses of Blood, and the falling of the *Matrix*. If the Pessaries are design'd for the cure of any Ulcer, or any other disease in the neck of the *Matrix*, the Pessary must be anointed with some Liniment or convenient Medicine in that part which is most able to reach it.

CHAP. VIII.

Of Clysters, and Suppositories.

Clysters, call'd by the *Greeks* *Enemata*, are also Injections, and liquid Medicines, injected through the Fundament into the Intestines, for the cure or ease of several Maladies. They are call'd Clysters or Washings, because their use is to wash the Intestines.

Clysters are prepar'd for several purposes, sometimes to cool the Intestines, sometimes to moist'n them; sometimes to soft'n and soak the harden'd excrements, or to stir up the expulsive Faculty, to dispel the wind, to assuage pains, to facilitate the Expulsion of the Urine, to draw forth or kill the Worms, to ease Women in Labour; to provoke their *menstruum's*, and to appease Hysteric passions, to assuage tormenting Gripes, and to make a diversion of Humours or Vapours, which flie to the Head, Stomach, Brest, Reins, or any other parts of the Body.

Clysters are usually compos'd of the Decoctions of Roots, Herbs, Seeds and Flowers, of different vertue, according to the intention of the *Physician*. The Decoctions are for the most part made in fair Water, but many times in Milk, Whey, Meat-broths, ordinary *Spanish-wine*, Urine, Oxycrat, Hydromel, and several other Liquors. And besides the ordinary Roots and Flowers, which are boyl'd for Clysters, many times there is an occasion to mixe Laxatives, such as are Senna, Coloquintida, Rhubarb, and many others, and to dissolve therein the Strain'd-decoctions of Opiats, Honeys, Syrups, Sugar, Salts, Yolks of Eggs, Turpentine, Oyls, Extracts, and many other things, which it would be too tedious to repeat. The forms of Clysters are so familiar, that it is to no purpose to insert them.

Suppositories are solid Medicines about the length and bigness of the little Finger, round and pyramidical. They were invented for the convenience of those who have an aversion to Clysters, or of such whose Sickness and constitution will not admit of them. The ordinary ingredient of Suppositories is Common-honey, Bay-salt, Salt-gemme, or Aloes, or Coloquintida in powder, or some Hiera, or Laxative Ejectuary. Sometimes Suppositories of Sope cut round and small at the end will suffice. Some there are that make use of Muscardins, or bits of Paste made of Gum-*Tragacanth*, Rose-water and Musk. So that in these things every one is at liberty to make choice of what he likes best.

CHAP. IX.

Of Wines.

ALL the World knows that the Grape is the Fruit of the Vine; and that Wine is the Juice of the Grape; but this Juice would not be true Wine, did it not undergo a Fermentation; and if the subtle parts had not by that means been separated from the grosser, and by that means were not become capable of operating as they do: Not that their Fermentation gives to the subtle parts of the Wine their utmost purity. For that requires other means, as you shall hear in the third part of this Work; and therefore I shall here at present only describe the preparation of two sorts of Wine most in use, the first of which may serve as an Example how to prepare any other.

Vinum Absinthii.

Rx. Summitat. floridarum siccarum Absinthii majoris vel minoris Fasc. j. Incide & immitte in dolium, quod pintas Parisienses quinquaginta aut circiter contineat. Impleatur dolium succo Racemorum recenter expresso, & reponatur in Cella vinaria ad fermentationem, qua perfecta, quod per fermentationem deperditum est Vino suppleatur, & diligenter dolio obturato, servetur Vinum.

Wormwood-Wine.

Rx. Of the Flowrie drie-tops of the bigger or lesser Wormwood, Fasc. j. Shred them and put them into a little Vessel containing fifty pints of *Paris*, or thereabouts. Fill the Vessel with the Juice of Vine-clusters newly press'd forth, and set the Vessel into a Wine-Cellar to ferment. The Fermentation being over, supply the waste of the Fermentation with Wine: then carefully stopping up the Vessel, keep the Wine.

The

They that can endure the bitterness of Great-Wormwood, may make choice of it for the preservation of this Wine: But the nicer sort choose the little, whose vertues are no less then those of greater. Take the Flowerie-tops, and having weigh'd out the quantity prescrib'd, shred them and put them into a little Bag, which is to be so fasten'd to the bung-hole, as to hang in the midst of the Liquor. Place the Vessel in the Cellar, fill it with the Juice of clusters newly squeez'd, and let it stand for two months, during which time the Wine will ferment and be fully charg'd with the smell, taste and vertues of the Wormwood. When the Ebullition of the Wine is over, fill up with white-wine, burnt-wine, or *Spanish*-wine the waste of the Fermentation: Then stop up the Tub, and keep the Wine for your use.

The Juice of the New-gather'd-grapes is to be preferr'd before all sorts of Wine, for the preparation of Wormwood-wine, and of all compound Wines; because that Juice being newly squeez'd forth, by subtilizing and disengaging it self from its terrestrial parts by Fermentation, penetrates more inwardly the ingredients which are put into it; and operates more effectually then a wine could do already fermented, whose subtle parts are subject to dissipation. For this Juice loses nothing to speak of in its Fermentation with the Wormwood; but the same slegm which the ordinary wine loses in its own. And in the mean time by means of the heat which the Fermentative-spirits excite in it, it is better able to penetrate the body of the wormwood, and to charge it self with its vertue, then otherwise it would be. By this means also it may be kept a long while, provided the Vessel were full and close stoppt.

Wormwood-wine is very much commended against the Diseases of the Stomach and Liver, especially proceeding from a cold cause. It dissipates wind and crudities, it helps and increases the appetite, kills worms, resists putrefaction; helps concoction and distribution of the nourishment, and consumes bad humours. It brings down the vapours that rise from the *Matriæ*, and opens its obstructions, and is very proper for the Green-sickness, and to provoke the *menstruums*. Take three or four ounces in a morning fasting, for several days, as you find it requisite.

Vinum Stibiatum; vulgò
Emeticum.

R. Vitri aut Reguli Antimonii, vel si lubet, Croci Metallorum, aut Magnesia Opalina subtilissime pulveratorum, ʒ iij. Vini Hispanici aut Vini albi generosi pintas duas Parisienses. In Lagena Vitrea simul collocentur, probeque obturata vase in loco temperato per ultimum macerentur, & sæpius agitentur, simulque tandem serventur, ut usus tempore Vinum Clarum Antimonium supernatans, per inclinationem effundi & sumi possit.

Stibiated wine, vulgarly Emetic; or apt to provoke vomiting.

R. Of Glass, Regulus of Antimony, or if you had rather, Crocus Metallorum, or Magnesia Opalina, finely powder'd ʒ iij. Spanish-wine or strong French-white-wine two Paris-pints: Put them together in a Glass-bottle, and the Bottle being carefully stopp'd, let them macerate eight days in a temperate place, and let them be oft'n stirr'd; and at length let them be all kept together, that when it is to be us'd, the clear wine that swims above the Antimony, may be pour'd forth by inclination, and so tak'n.

Having Glass or Regulus of Antimony, or Magnesia Opalina, well prepar'd and finely beat'n upon a mortar, it is an easie thing to prepare *Emetic-wine*. For it is sufficient to get a good Glass-bottle, and to put the prepar'd Antimony into it, and to pour the prescrib'd quantity of wine into it, then to stop up the Bottle, to set it in a temperate place, to shake it from time to time for seven or eight days together, and to keep the wine and the Antimony together in a Bottle well-stoppt, to make use of as occasion serves, pouring out by inclination, and taking the clear wine that swims above the Antimony, to such a quantity as is requisite; taking care not to raise the bottom, for fear some part of the Antimony should mixe with the wine. Upon which this observation is to be made, That the prescrib'd dose of wine and Antimony need not be too religiously observ'd. For though there should be a little more or a little less of the one or of the other, it would not signifie much, since oft'n Experience teaches us that the wine takes to it self no more of the vertue of the Antimony, then it is able to receive; and that the lying with the Antimony one, two or more months, as the wine might do, renders it nothing more strong then that which has lain but eight days, if it be oft'n shak'n.

You

You shall observe also that the same powder of Antimony, upon which the wine has staid a long time, and which has imparted its Emetic and Purgative Quality to it, is still able to impart as much vertue to more new wine, if macerated with it, and that after that wine is sufficiently strong of the Antimony, and spent, the same Powder will serve again several times for the same use. And that if you be but careful always to pour out the wine gently, and to take always only the clear, you shall find very near the same weight of the powder as at the first maceration; which is more confirm'd by the trial which we make of Cups of Regulus of Antimony, which will give a Purgative and Emetic Quality to the wine, which shall be fill'd and kept in them but for some few hours: and then again bequeath the same vertues to new wine in the same space of time, and will still afford the same qualities to other wine, as long as the life of one, or several men continues to make tryal of it, without perceiving in the Cup any diminution of its weight or vertue.

Emetic Wine purges upwards and downwards ill humours, especially those that are bred in the Stomach. It operates with more or less violence according to the constitution of those that take it, or according to the superfluity or small quantity of matter which it meets with. And therefore it is much more proper for persons that are full of humours, then for those that are not so much troubled with them, and it is better at the beginning then at the end of a sickness, when the Patient is weak. It may be given alone from one, to two, three, or four ounces, a good distance before Meals, according to the Age, Strength, and Nature of the Disease. It may be mingled also among Purgatives. Where note, that if the Purgatives are too strong and exceed in quantity the Emetick-wine, then it acts as they act, and works only downwards. But if it surmount the Purgatives in quantity and strength, it constrains them to work as that does, upwards and downwards.

Emetic-wine is never giv'n to those that are narrow-Chested, nor to those that are hard to vomit, or if there be any fear of any Inflammation of the Bowels.

CHAP. X.

Of Vinegars.

VWE may say of Vinegar, that the first Original of it is the Juice of Grapes, as well as of Wine. But the Juice of the Grape must be made Wine by Fermentation before it can be turn'd into Vinegar. And though Vinegar may be made of Beer or Cider, as also of water; I hold, that good and true Vinegar is only to be made of Wine. Some attribute the only cause of the acidity of Vinegar to the dissipation of the volatile Spirits of the Wine. But it seems that they have not sufficiently examin'd this business. For they that know the Nature and Original of acids, and the effects which they are able to act upon Salts and Spirits, especially upon volatiles, will as much attribute to them the turning of Wine into Vinegar, as to the absence of the volatile Spirit of Wine. For although before this alteration, some part of the Spirit of Wine may chance to be dissipated, yet we are to believe, that the corruption which happens to wine, happens through the disproportion of its parts, and that the excess of the acid is the chief cause of turning wine into Vinegar. For so long as the flegm, the volatile and tartarous parts which contain the acid, keep nigh a just proportion together, the Wine continues good. But when any one of those parts predominates, there must of necessity happen some corruption, which proves to be more or less according to the Quantity and Nature of the part which predominates, which causes very great differences in the decay of the Wine. For when the Wine decays through excess of flegm, it grows greasie, and turns. But though the flegm be able to enervate the force of the volatile part of the Wine by its own corruption, and by its excess, it cannot nevertheless destroy it, as it destroys almost entirely the tartarous acid part. Whence it comes to pass, that though no good Vinegar can be made of Wines grown greasie, and turn'd; Yet in Distillation you may draw from hence as much volatile Spirit, as from Wines neither greasie nor sour. And you might draw from hence altogether quite as much, but that the abundance of flegm, which caus'd the corruption of the Wine, in part takes up the place of the volatile Spirit. The excess of the volatile Spirit happens very rarely to Wine, and though it should exceed the other parts in quantity,

quantity, as it is very able to preserve it self without them, it would never corrupt them, but would make the Wine violent and reaking, so that it would be less serviceable for common use, and would intoxicate sooner: But when the Tartarous part surmounts, it draws to it the nitrous part of the Air, which is in some sort Homogeneous to it, and multiplying it self by a little and a little, instead of chasing away the volatile Spirit, which it has surmounted in quantity, it unites it self strictly to it, to make it in some measure conformable to its own Nature, while the flegm is no longer able to temper the acid which has got the upper hand of it. Vinegars by their acidity slack'n the activity of the Salts, and volatile Spirits; joyning themselves to them, and altering their action; and are successfully made use of in Distempers caus'd by the Salts, and volatile Spirits, or by humours that participate of their Nature, chiefly Cholerick humours, to which purpose acid Fruits and Juices are usually administred with good success.

Acetum Rosatum.

R. Rosarum Rubrarum exungulatarum Siccarum, lbj. Aceti acerrimi, lb viij. Vase Vitreo bene obturato excipiantur per quindecim aut viginti dies insolentur; deinde coentur & exprimantur. Colatura cum pari Rosarum Pondere in eodem vase iterum per idem tempus insolentur, coentur & exprimantur, & servetur acetum.

Take the great buds of Provence-Roses, and cut away the white part at the bottom. Dry the red part in the hot Sun, if it may be done, at least in the Air, as soon as possible may be. Take a pound of Roses thus dry'd, and put them into a strong glass-bottle; upon which you must pour eight pints of good Vinegar, and having stop'd the bottle, expose it to the Sun for fifteen days or three weeks; then strain and press out the whole, and return the straining to the same Vessel, over a pound of fresh Roses; then stop up the bottle, and expose it to the Sun as long as before: then strain the Vinegar and squeeze the Roses, and keep the Vinegar for your use. You may, if you please, leave the Roses in the Vinegar, and strain it only when you have occasion for it.

Vinegar of Roses is as much us'd in Dyet, as in Physick. It cuts, cleanses, tempers, it gives an appetite, it provokes sleep being apply'd to the Fore-head, it removes the Acrimony of the fix'd Salts, it moderates the activity of the volatile, it kills the Worms, stays Vomiting, stays the Operation of Purgatives, cools Inflammations, assists Expectorations, and loosens Flegm, stops the Piles being taken inwardly, and applied outwardly; resists Putrefaction, and is good to smell to in noisome and Pestilential seasons. It is mix'd among several Liquors, as also in Liniments, Unguents and Emplaisters.

Vinegar of Roses may serve as an example for the making of several Vinegars, made of Flowers, as of Elder, Gilli-flowers, Rosemary, Sage, Marigolds, &c. But because these flowers do not abound so much in moisture as the Rose, you may take the pains to dry them, or at least to half-dry them, not to dissipate their good parts.

Acetum Scilliticum.

R. Scillas duas molis mediocris, quarum corticem externum, & cor medium cultro Arundinaceo eximes, Laminas inter cor & Corticem existentes in partes divides, & soli per multos dies ad humidum superflui consumptionem expones. Harum lbj. in lagenam capacem immittes, illique superfundes Aceti Albi Acerrimi, vel potius Spiritus Aceti, lb viij. Lagenam obruabis, & per quadraginta dies radiis Solaribus expones. Colas deinde, & expressis Laminis, Acetum servabis ad usum.

Vinegar of Roses.

R. Of dry red Roses, the white being nipt off, one pound; of very tart Vinegar, lb viij. Put them into a Glass-Vessel well stopp'd; set them in the Sun for fifteen or twenty days, then strain and press them out. Let the straining be again set in the Sun during the same time, with the like weight of Roses. Let it be strain'd and press'd out, and let the Vinegar be kept.

Vinegar of Squills.

R. Two Sea-Onions of an indifferent bigness, peel off the outward Rind, and take out the heart with a knife made of a Reed; the thin slices between the outmost skin and the heart divide into parts, and expose them for many days to the Sun, till the superfluous moisture be consum'd. Of those put a pound into a large stone-Jug, and pour upon them eight pints of very sharp White Vinegar, or rather Spirit of Vinegar. Stop the Jug, and set it in the Sun for forty days. Then having strain'd and squeez'd the thin slices, keep the Vinegar for your use.

They that have travelled into *Spain and Portugal*, have there met with two sorts of true Sea-Onions, one of which being white, is call'd the Male; the other being red is call'd the Female. The white is usually somewhat the lesser: it is in taste like the red one, but a little thought more tart: However the vertues of both are the same. These Squills are Onions that grow by the Sea-shore, the Root whereof is large, short, close, and bended. In the Months of *August and September*, they put forth a round, sleek, shining stalk altogether bare, of a whitish colour enclining to Grideline, as big as a Man's finger, about two Cubits high, surrounded at the top with several little white-flowers enclining to purple, growing like an Ear; after which follows a black-seed like that of ordinary Onions which is ripe in *October and November*. The leaves of both Squills are like those of a Flower-de-luce, but bigger; they begin to sprout forth in *November and December*, and grow dry and die in *May or June*. The white is accounted better then the red because of the colour.

The drying of the slices was only intended to correct any ill quality which may be in them; for as much as all that is dissipated by the Sun, is only a superfluous moisture, void of any considerable vertue; and therefore care is tak'n to prevent that superfluous moisture from taking away the strength of the Vinegar, and causing it to putrifie, in regard there is flegm enough in the Vinegar without having any need to multiply it.

Dioscorides and Matthiolus most highly applaud the vertues of Vinegar of Squills, and affirm that by taking three ounces every Morning, two hours before any eating, and taking a little walk after it, it will preserve a Man many years in perfect health. That he shall never have any Disease in Mouth, Throat or Stomach. That he shall have a voice always clear and clean, respiration free, quick sight, hearing good, an excellent complexion. That he shall be free from Windiness: That all the parts of the body shall do their Offices: That he shall be always fit for business, never have an ill breath; shall digest whatever he eats, and turn it into good nourishment, and have a kindly evacuation of the Excrements. That it will recover the Pthysical, though far gone; very much help the Epileptic, abating the effects of the Disease, and quite taking them at length away, if the Disease be new. That it will give ease in the Gout, and diseases of the Joynts; open obstructions of the Liver, Spleen, Mesentery, and other parts: and in short will procure soundness of health, and a prolongation of Life. But because our Physicians seldom prescribe this Vinegar, I have not made Tryals enough to confirm what those great Men have writt'n.

Acetum Theriacale.

R. Radicum Angelica,
Valeriana Majoris,
Men Athamantici,
Imperatoria,
Gentiana,
Vincetoxici,
Carlina,
Zedoaria,
Tormetilla,
Bistorta, an. ʒj.ß.
Cortices Cetri sicci,
Seminis ejusdem,
Baccarum Juniperi,
Cardamomi minoris,
Cubebarum, an. ʒj.
Foliorum Ruta,
Scordij,
Distanni Cretici,
Cardui Benedicti,
Centaurei minoris,
Florum Aurantiorum,
Rosarum rubrarum, an. Mj.

Radices & Semina Comusa cum foliis incis excipiantur Laguna Vitrea satis ampla, illisque superfundantur Aceti Acerrimi vel

Treat'd Vinegar.

R. Of the Roots of Angelica,
the bigger Valerian,
Athamantic Spiguel,
Master-wort,
Gentian,
Swallow-wort,
Carline Thistle,
Setwall,
Tormetill, ʒj.ß.
Snake-weed, an. ʒj.ß.
Rind of dry Citron,
Seed of the same,
Juniper-berries,
Lesser Cardamoms,
Cubeb, an. ʒj.
Leaves of Rue,
Water-Germander,
Cretan Dittany,
Carduus,
Lesser Centaury,
Orange-Flowers,
Red-Roses, an. Mj.

The Roots and Seeds being cut, put them into a Glas-bottle, large enough and pour upon them twelve pints of the most sharp potius

potius spiritus Aceti lb. xij. Obtinetur Lagena,
& per dies duodecim radiis Solaribus exponatur, sapinus agitando, postea coletur & exprimatur omnia, serveturque Acetum ad usum.

Vinegar, or rather Spirit of Vinegar, and expose them to the Sun twelve days, oft'n stirring them: then strain and squeeze out the ingredients, and keep the Vinegar for use

The Composition of this Treacled-Vinegar is a mixture of the vertues of several choice Medicines, really Theriacal, and able to furnish the Vinegar with all the good qualities expected from it. And to facilitate the preparation, I have thought fit to give a brief Description of the Medicaments, in the choice whereof there may be some doubt.

Authors describe several sorts of Angelica, of which the two principal are, the *Bohemian*, and that which grows upon the high Mountains of *France*, *Spain* or *Italy*. Some prefer the *Bohemian*; but that may be more for the rarity of it then for any vertue extraordinary above that of our Mountains; the stalk whereof is above a Cubit in height, knotted in several parts, hollow and having many Branches; the Leaves long and dented, the colour dark-green, with ombels of white Flowers: The root is large, round, about a foot in length, divided into parts like a beard; white within, and somewhat dark without. The Seed is large and flat: It is of a thin substance; of a smell and taste very Aromatic. The Great Valerian grows in the Mountains of *Pontus*, as also upon some Mountains of *France*. It has a soft, broad, smooth Leaf, very jagged. The Stalk is smooth, soft, hollow, inclining to red, somewhat knotted, about two Cubits high. The Flowers are small and white, inclining to purple, and growing in Tufts. The Root is half creeping, as big as a man's finger, having of each side and all a-long the lower part several little white Roots that run into the Earth. The taste is very Aromatic, and the scent piercing, and much like that of Nard.

Meum or Spignel, call'd *Ashamantic*, from the Mountain *Ashamas* in *Thessalie*, where it grows very plentifully, abounds also upon several Mountains of *France*. The Leaves are small and long like those of Anise. The Stalk is about a Cubit high, or sometimes more, with ombels of flowers at the top. It hath several Roots pack'd together, black without and white within, as big as a Man's little-finger, cover'd towards the bottom with a kind of hairy excrecence like the stalk of Sea-holly. It is of a thin substance, but of a smell and taste very Aromatic.

Imperatoria grows upon the high Mountains of *France*, *Italy* and other parts. The Leaves are broad, somewhat pointed, indented and jagged, growing from the Root by three and by three, at the end of a long tayl: They are strong and rough to handle, as is also the stalk, that inclines somewhat to red, being about two Cubits high. The Flowers are white and in ombels. The Seed in shape, taste and smell is very like to the *Seseli*, or Hartwort of *Marseilles*. It has several roots, which are neither very long nor big, lying on the ground, knotted, dark-colour'd and rugged without, somewhat green within, of a sharp taste, thin substance and very Aromatic smell.

Gentian grows upon high Mountains in moist places. The Leaves are large, broad, and inclining to red, somewhat resembling the leaves of Plantain; but much more like to white Ellebore. The Stalk about the bigness of a man's finger, is very smooth, five or six foot high, and parted by knots; whence spring forth leaves by two and two, less then those which are next the root. The Flower is yellow, the Seed flat and smooth; the Root very much like that of Marsh-mallows; but much bigger and thicker. It is also very yellow and very bitter.

Swallow-wort grows usually in Mountainy-places; the stalks are about a cubit high, smooth, round, limber, and difficult to break. The leaves are dark-green, long, pointed at the end, somewhat like those of Ivy. The Flowers are white, small, and stinking. After which succeed round, long knobs full of red-seed, somewhat broad and downie, in shape like a Swallow. The Roots are small and odoriferous, and very much commended against Poysons.

The Carline-Thistle grows upon high Mountains. The Leaves are large, broad, rough, prickly, pointed, display'd, and extended like branches. It has no stalk, but lies upon the ground, producing a little above the Root a round, hoary, prickly head that spreads into a large Flower of a yellow colour. The Root is about the bigness of a Man's fist, and somewhat more: it is about a foot long, and runs directly into the ground. It is somewhat dark colour'd without, and white within, of an indifferent substance. The taste is not displeasing, inasmuch that the Country-People feed upon it. The smell is very Aromatic.

The Plant of Zedoary is not describ'd by Authors, yet the Root is very much in use. It is somewhat inclining to red, a little flat, as long and as thick as a Man's little finger, having a kind of resemblance to ginger, but less knotty. The taste is a little bitter, but Aromaticall. It is commended for a great Cordial, and good against Poyson.

Tormentil call'd *Heptaphylon*, because that the Leaves grow sev'n and sev'n together, has several creeping-stalks, round and smooth. The Leaves like those of *Cimifoye*. The Flowers yellow, but very small. The Root short, as big as the little finger, black without, red within, environ'd with strings; the taste is astringent, and the smell somewhat Aromatic.

Snake-weed grows generally in the Mountains; the Leaves are long, fibrous, and like those of the lesser Dock. The upper-part is dark colour'd and spotted: the Stalk is not very big, thrusting forth some kind of Leaves at the top, which is beset with little Purple-flowers in the form of a Spike, being about a cubit in length. The Root is red within, dark colour'd without, beset with little threads; of a very compact substance; in taste and smell like that of Tormentil.

The Lesser-Cardamom is esteem'd the best. We have no Description of the Plant that produces it, no more then of the other Cardamoms. The form of the Cod of the Lesser is triangular, resembling that of the Fruit of Ben. The Seeds are set in order and well-crowded into the Cod, within a little as big as those of *Amomum*, of a purplish colour, separated by little membrains, and filling all the Cod. Their taste is biting and very Aromatic.

The Plant of Cubebs is not well known yet: we believe it to resemble black-Pepper, and that it creeps up and supports it self upon Trees that grow next to it. They grow in *Java*. The Seeds of Cubebs are cluster'd together like those of Ivy, but they have a little tail which black-Pepper has not. Their taste is biting and Aromatic. You must cut off the tail with a pair of Scissers, and throw it away.

The true Dittany is no where to be met with but in *Candy*, upon the Mountain *Ida*. It has many stalks very smooth and woollie, as also are the Leaves, by reason of the cotton that covers them; they are of a round figure, about the bigness of the Nail; the Flowers are purplish, and like our ordinary Violets. They are intermix'd with the Leaves, especially at the top of the stalks like those of *Scordium*. Which I affirm to be true, as having oft'n had the real Dittany in flower, contrary to the opinion of several Writers, who affirm that Dittany never flowers: For which they may be excus'd, as having never seen any Dittany, but what was gather'd before the Dittany came to be in flower, and consequently took it to be always the same. And I believe it is for the same reason that you shall never find the Flowers but only the Leaves of Dittany prescrib'd by Physicians, which in my opinion are not to be rejected; nor are they to be separated from the Leaves, no more then those of *Scordium*, Calamint, Germander, Ground-Ivy and other Aromaticall Herbs. The Roots of Dittany are very numerous, small-cluster'd together, dark-colour'd without. They are accounted good for nothing: the Leaves and Flowers are very Aromaticall in taste and smell.

All the Simples in this composition of Vinegar must be put in drie. You must bruise the Roses, Citron-rinds, and all the Seeds or Berries; you cut must the Herbs, and put them all into a large strong Glass-bottle, and pour out upon them twelve pints of excellent Vinegar, stirring the Ingredients, so that they may be equally steep'd in the Vinegar. Then stop up the Bottle, and expose it to the Sun for forty days; at the end whereof strain and press out the Ingredients, and put up the Vinegar in a Bottle close-stopp'd.

The virtues of this Vinegar are extraordinary, especially against the Pestilence and in all contagious and Epidemic Distempers. It is very good to resist Poyson and contagious Air; and to cure the bitings of venomous Beasts. It resists putrefaction and kills the Worms. It cuts and attenuates thick matters, and helps digestion. It is administer'd both inwardly and outwardly. The dose of it is one or two full Silver-spoons full in Wine, Broth or any other convenient liquor. It is mingl'd in Potions, and also in liquid Epithems. It is put up into the Nostrils, apply'd to the Temples, to the Stomach and Wrists. It may be dipt in a sponge, and carry'd in a little Box with holes in it to smell to in sickness-time, or against any ill scents.

Acetum Febrifugum, sive Aqua Prophylactica Sylvii de le Boe.*The Fever-vanquishing Vinegar, or water for prevention of Sylvius de le Boe.*

R. Radicum Petasidis, ʒ ij.
 Angelica,
 Zedoaria, an. ʒ j.
 Foliorum Ruta Hortensis, ʒ iij.
 Melisse,
 Scabiosa,
 Calendula, an. ʒ ij.
 Nucum jugland, immaturar. incisurum, lb j.
 Pomorum Citrurum recentium incis. lb j.

R. Of the Root of Butter-Bur, ʒ ij.
 Angelica,
 Zedoarie, an. ʒ j.
 Leaves of Gard'n-Rue, ʒ iij.
 Baume
 Scabious,
 Marigolds, an. ʒ ij.
 Green-Wall-nuts cut, lb ij.
 New Pome-Citrons slic'd, lb j.

Consundantur prius Radices, deinde cum reliquis omnibus in Aceti distillati lb xij. per noctem macerentur, postea lento igne cinerum fere ad Pharmacorum siccitatem distillantur, prolektumque acetum in Lagenis Vtreis asservetur.

Bruise the Roots first, then with the rest of the ingredients, let them macerate all night in xij. pints of distill'd Vinegar. Then let them be distill'd with a gentle fire of embers till the ingredients be almost drie; keep the Vinegar so gotten, close stopp'd up in Bottles.

The Butter-Bur grows in moist places in Mountains: in the Spring-time it puts forth a tender stalk, hollow and pithie, about a Palm and half high; having at the top several flowers, small and cluster'd like those of Olives, somewhat pyramidical and fair to the sight: the Leaves come forth after the stalk is fall'n. They are fasten'd in the middle to a long tail about a cubit long, thick and full of pith. They hang like a hat turn'd the wrong way: they are large and round, and somewhat whitish underneath; upon one side cleft to the very middle; which cleft coming to close, makes the Leaf resemble a Champinion upon its stalk. The Root is large, dark-colour'd without and white within, of a bitter and unpleasing taste, and a strong and unsavoury smell.

The Roots being well scrap'd must be well-brais'd in a Marble-mortar with a wood'n pestle among the green Wall-nuts, Citrons and chopt Herbs; then put them into a Glasse-cucurbit of a sufficient bigness, and pour upon them xij. pints of good Spirit of Vinegar that did not yield above three pints at a distillation: then fit and lute on a head upon the Cucurbit and leave the ingredients in digestion all night, and the next day distil them with a moderate fire of embers, till the Ingredients are drie; taking care that they do not burn at last; and you shall have a Distill'd-vinegar as clear Water.

Sylvius the Dutchman extols this Vinegar for the cure of all sorts of Agues, as well intermitting as continual. He would have the patient mix it in his ordinary drink, in Distill'd-Waters, in Apozemes, in Mixtures, Potions, Broth, &c. It provokes very gentle Sweats, it qualifies and takes off the acrimonie of the Choler, it quenches thirst, corrects the bitterness of the mouth, and stays vomiting. It is very much commended against the Pestilence, and in all Epidemic-diseases. It may be also put up the Nostrils, apply'd to the Temples and Wrists; or be dipt in sponges to be smelt to for the comfort of the Noble-parts.

This Vinegar must not be us'd in Diseases occasion'd by Acids; for there you must have recourse to the fix'd or volatile Salts.

CHAP. XI.

Of Robs.

THE Arabick word *Rob*, which the Modern still retain was giv'n to the Juices of Fruits depurated, and boyl'd to the consumption of two Thirds; or rather to the consumption of three Fourths of their moistures. The Name of *Sapa* is given particularly to the Juice of Grapes depurated and boyl'd after the same manner. And therefore there was no ground for them that would make the Name of *Sapa* common to all Robs.

Robs. For though the *Sapa* be in effect a *Rob*, yet we acknowledg for a *Sapa* no other *Rob* then that of the Juice of Grapes. *Defrutum*, is a diminutive of *Sapa*; being only depurated and boyl'd to the consumption of the third part. And is properly that which we call Burnt-wine. It might be an easie thing to prepare *Robs* of the Juices of several Fruits depurated; but considering that it is not for *Apothecaries* to trouble their Shops with Remedies little in use, it shall suffice to set down the most necessary.

A Rob, or Simple Sapa.

R. *Succi recentis Uværum albarum perfectè maturarum lb xxx. Coque igne lento in vase fictili vitreato, vel in Abeneo, flammò intus obducto, donec tertia tantum pars succi supersit. Si vero Defrutum optaveris, ad tertia tantum partis consumptionem coque.*

R. Of the new Juice of white Grapes perfectly ripe lb xxx. Boyl it over a gentle fire in an Earth'n-glaz'd-vessel, or a Copper-vessel tinn'd within, till the third part of the Juice only remains. But if you desire a *Defrutum*, boyl it only to the consumption of the third part.

You must not expose the Juice of the Grapes to the Sun, nor use any artifice to purifie it before you set it upon the fire, to make a *Rob* or *Defrutum*. But on the contrary you must avoid it, because that Depuration would never come to pass without the Fermentation of the Juice, whereby it would change its nature and become Wine, and would lose all its volatile Spirits in boyling. Whereas by avoiding Fermentation, those Spirits are no-where settl'd or concentr'd; so that while they are upon the fire there exhales nothing but a gross and unuseful flegm. Which may serve for an *Item* to those, who preparing the *Defrutum* or *Sapa*, may be ignorant of the reasons why we take the Juice of Grapes newly press'd out, and not the good Wine, which because it is more pure, they might probably think proper to be preferr'd before the new Juice.

The Juice of Grapes is differently boyl'd in *Languedoc*, *Provence*, and other places, for sometimes they only boil it to a *Defrutum*, and call it burnt-wine. Sometimes they continue and boyl it to the consistency of a *Sapa*, which comes near the ordinary Syrups: sometimes till it be as thick as soft Electuaries, and this they call *Raisiné*, or the Grape-Confection, and use in the conditing several Fruits. In all which things they thus proceed.

They take a good quantity of white Grapes perfectly ripe, take out the stones, squeeze and press out the Juice in a clean cloth. Then for example they take about thirty pints of this Juice, putting it at the same time into a great Earthen Vessel well-glaz'd, or in a Cauldron, or Copper-Bason tinn'd within side; and setting the Vessel upon a moderate fire, they cause the Juice to boil softly till the third part be consum'd, which is the boyling allow'd to burnt-wine. Then they take the Vessel off from the fire, and stir the burnt-wine continually with a stick till it be quite cold; which they do to evaporate some superfluous humidity, which might remain in the burnt-wine. Then they cover the Vessel, and letting it stand till the next day, they pour forth by inclination the clear liquor into a proportionable Vessel, leaving the settlement at the bottom. Then they let the Vessel in the Cellar for six or seven weeks, to ferment like the new Wine. After which, to make up that little burnt-wine which the fermentation had dissipated, they fill up the Wine with other burnt-wine reserv'd on purpose, or else they put in Spanish-Wine, or good White-wine, and stopping up the Vessel, keep it in a cool place for use.

But if instead of burnt-wine, you desire a *Sapa*, you must boil the juice of red Grapes, till there be but a third part left; Then stir it with a stick till it be quite cold, and let it rest all night in the Vessel, the better to purifie it self from its Lees. But then instead of putting this depurated Wine into a Cask, you must let it boil again over a little fire, in the same Vessel very clean, till the half be consum'd; then take it off the fire, let it cool, and stay two or three days; then pour out the clear liquor by inclination, and leave the feces at the bottom of the Vessel as before. By this second boiling, the Juice will be reduc'd to two thirds, and will be of a consistency not unlike that of ordinary Syrups.

You may also return the same *Sapa* upon the Fire again, and consume about a fourth part, over a very gentle fire, if you desire it should be boyl'd to the consistency of Electuaries; or for the preserving of Condiments. You may Aromatize these Juices thus differently

rently boyl'd by mixing with them, when they are cold, some drops of Oyl of Cinamon or Cloves, incorporated with fine-powder'd Sugar.

That which they call burnt-wine in *Languedoc* and *Province*, is a preparation very like that of Spanish-wine. This Wine is to be lookt upon as an Alimental nourishment, as well as the *Sapa* or the *Raisiné*. It breeds good and quick nourishment, and is proper to restore lost strength, to fortifie the Heart, Stomach, and all the other noble parts, to create an Appetite and help Digestion. The Dose of the burnt-wine is from one ounce to four, that of the *Sapa*, from one ounce to two. That of the *Raisiné* much the same. The burnt-wine is also made use of in Clysters instead of Decoctions, chiefly in Colicks proceeding from Wind and Acids.

Rob Cydoniorum.

R. Succi Cydoniorum ad maturitatem vergentium, lb xvij. Coque igne lento in vase fictili vitreato, donec Tertia tantum pars supersit. Refrigeratum Rob, quiete & decantatione fecibus liberatum, Olorum Cinnamomi & Caryophyllorum ana guttis tribus, Saccharo pulverizato exceptis, Aromatizetur & servetur.

A Rob of Quinces.

R. Of the Juice of Quinces enclining to be ripe lb xvij. Boyl them over a soft fire in an Earth'n glaz'd-Pot, till only the third part remain. When the Rob is cold, and freed from its feces by settlement and inclination, take of Oyl of Cinamon and Cloves, an. three drops, mix'd with powder'd Sugar, and Aromatize it, and then keep it for use.

Take a good quantity of Quinces half ripe, rasp them one after another into Earthen Pipkins, all but the inward hard Core. Let them settle two or three days, then squeeze them through a new strong Cloth, gently at first, afterwards very strongly. By that means you will have a Juice of Quinces very clear. Of which take eighteen pints, and put them into an Earth'n glaz'd Pipkin, or into a skillet of Copper Tinn'd, and let them boyl over a gentle fire, till two thirds are consum'd. Then let them cool, and set the Rob aside in the skillet for two or three days; then pour the clear Liquor into another very clean Vessel, and add to it the Oyls of Cloves and Cinamon, incorporated with an ounce of fine-powder'd Sugar, to mix them the better together, and when they are well mingl'd, put them up into a bottle well-stopp'd, and keep them for use.

The Rob of Quinces is indu'd with all the principal vertues that are attributed to the pulp of the Quinces. It is recommended to fortifie the Stomach, to help the weakness of retention in the Stomach, and Intestines. To create an Appetite, and help Digestion. It is giv'n with success in Diarrhea's, Dysenteries, Lienteries, the Cholerick Disease, and Internal Fluxes of Blood.

Rob Mororum seu Diamorum.

R. Succi Mororum Rubi Humilis arvensis, Succi Mororum mori arboris nigrae semi-maturorum, Mellis Narbonensis depumati, an. lb iij. Coquantur igne lento in vase fictili vitreato ad debitam consistentiam, illisque permiscantur Spiritus Vitrioli vel Sulphuris, gutta, x.

Rob of Mulberries, or Diamorum.

R. Of the Juice of Mulberries, of the low-field Bramble. Of the Juice of Mulberries of the black Tree, half-ripe. Of clarify'd Honey of Narbonne, an. lb iij. Boyl them over a gentle fire in a Glaz'd Earth'n Vessel, to a due consistence, and mix with them twenty drops of Spirit of Vitriol or Sulphur.

This Rob may be made with these two Juices, or with either of the two separately without any addition of Honey; but besides that the Honey increases their deterfive and cleansing quality, it makes the Rob more delightful, and fitter to be preserv'd for a longer time. The two sorts of Mulberries must be gather'd before they come to their maturity; that the Rob may be more deterfive.

You must squeeze out the Juice through a strong Cloth, let it settle two or three days; then pour the clear Liquor by inclination into another vessel, weigh the quantity prescrib'd

scrib'd, and boil it over a small fire in a glaz'd Earth'n-pot, with the Honey clarify'd before, to a consistence like that of Syrups. Then let the *Rob* cool, scum it well, and add to it the Spirits of Vitriol or Sulphur, and so put up it in a glass-bottle, or a gally-pot well-stopp'd for your use.

This *Rob* is chiefly for the cure of Ulcers and Inflammations in the Mouth, Tongue, and Throat. For it is very proper to qualifie the Acrimony of the humours, to cleanse, stop up, and consolidate; sometimes this *Rob* is taken alone by the Spoonful. But it is most frequently mix'd in cooling and deterfive decoctions.

Rob Baccarum Sambuci.

Rx. Succo Baccarum Sambuci, tribus diebus per residendum depurati, lbvj. Aut quantum libuerit. Coque igne lento in vase fictili vitreato, ad duarum partium Consumptionem. Adde si volueris Sacchari vel Mellis despumati portionem aliquam.

Rob of Elder-Berrier.

Rx. Of the Juice of Elder-berries clarify'd by three days settlement, six pints; or as much as you please. Boil them in a glaz'd Earth'n-Pipkin over a soft fire to the consumption of two parts. Add if you please some little quantity of Sugar or clarify'd Honey.

You must take the Elder-berries when they are fully ripe, take from them all their little stalks, squeeze them through a strong Cloth, and draw out their Juice; let them settle for three days, separate them from their feces, and boil them over a soft fire in an Earthen-Vessel well-glaz'd, to the consumption of two thirds, or to the consistence of a *Rob*. Let it cool, and take off the scum if there be any. To make the *Rob* more pleasant and fit to keep longer, you may add a third or a fourth of its weight of fine Sugar, or clarify'd Honey.

This *Rob* is very much commended for the cure of Diseases of the Brain, particularly of the Epilepsie and Palsie. It is accounted a Specifick against Hysterick Passions, and for Dysenteries. It may be tak'n alone in a Spoon fasting, or mix'd in Potions. The dose is not certain: but you may take from half an Ounce to an Ounce at a time.

The other *Robs* which are prepar'd of the Juices of several Fruits merit no farther mention here, because they are converted into Syrups, which the sweetness of the Sugar renders more pleasing then all the *Robs* that can be prepar'd.

CHAP. XII.

Of Sweet-Meats.

THE difficulty of accommodating Medicines to the taste of Patients, and the desire of pleasing them, and to have at all times ready some parts of Plants of which they may stand in need, have been the principal occasions of inventing Sweet-meats. It happ'ns also that the liking which Patients take to them when sick, gives them a desire to continue the use of them when they are well.

And the healthy themselves have so far tak'n their part, and made Sweet-meats so common, that there is no good City, where there are not some who make it their Trade and Calling to make all sorts of Sweet-meats. But though it be not the *Apothecaries* business to make for the healthy, yet they are oblig'd for the benefit of the sick to condite several sorts of Plants which are not within the knowledge or practice of the ordinary *Confit-makers*.

If all the parts of Plants were to be had at all times, or if they were all of an equal perfection, there would be no great trouble to make provision of any Sweet-meats, nor need we make any conditement but upon occasion. But as they must have time to grow, increase, come to perfection, and then decline again, we must choose the best time for the vertues or qualities of the Plant which we intend to candie. Herbes, Fruits, Stalks, Flowers and Seeds cannot be fit but in their Season. Roots that may be had at all Seasons of the Year, yet are not fit to be condited till the Spring of the Year, when they begin to put forth their Leaves: for then they possess to themselves all that the Plant has of vertue; besides that they are then more tender and more juicie then

then at any other Season. Sometimes the Flowers are condited before they are blown; Seeds and Fruits half ripe: And sometimes we stay till every one of these comes to their perfect maturity. Sometimes the Roots, Flowers, Fruits, and other parts of Plants are condited whole, sometimes cut in pieces, either for convenience, or to separate what is to be thrown away. Sometimes they are to be reduc'd into a paste, and boyl'd with Sugar or Honey. But Sweet-meats are so common that I think I need not give many Examples thereof.

Radices Eringii conditæ.

R. Radicum Eringii mundatarum & in partes dissectarum quantum volueris: coque ad mollitiem in aqua communis sufficiente quantitate; in decocto dissolve Sacchari albißimi pondus Radicibus æquale: Coque ad Syrupi crassioris consistentiam; desuma, calidumque Syrupum Radicibus in vase fictili vireato positis superfunde. Post dies aliquot decantatum Syrupum ad priorem consistentiam recoque, calidumque radicibus superfunde. Idque ter, quaterve repete, & tandem ita Syrupum coque, ut in debita consistentia possit in posterum cum Radicibus asservari.

Eringo-Roots condited.

R. Of these Roots as many as you please; wash them well, then take out the pith and the outside, then boyl them in fair Water till they are sufficiently tender. Then take them out of the Water, lay them upon a white Linnen-cloth, and drie up the moisture as much as may be. Then weigh them, and take the same weight of fine Sugar, and boyl it with the Decoction of the Roots, scumming it from time to time, till the Sugar have acquir'd a consistency a little thicker then that of ordinary Syrups. Then put the Roots into a Pot of glaz'd earth, and pour the Syrup upon them fiery hot; some few days after pour this Syrup by inclination into a Bason, and re-boyl it over a soft fire, till it have acquir'd its first consistency; then pour it hot a second time upon the Roots. A while after boyl the Liquor a third time, and pour it upon the Roots again. Repeat this again if need be; and at length so boyl the Syrup that it may be kept for the future with the Roots.

Eringium or Sea-Holly is a Plant well-known: the Roots whereof must be gather'd in the Spring-time, when the Herb begins to appear.

Eringo-roots are opening and diuretic. They are also great friends to the Stomach, Liver and Spleen. They are sometimes mix'd in Opiates and other Medicines.

The Example of this Root may serve for the conditing of Succorie, Burrage, Buglofs, Comfrey, Elecampane, Satyrion, Scorzonera or Vipers-grass, and several others; from all which you must take off the small rinds and superfluities. They may be condited whole that have no pith, or are not very big; and cut into slices those that are over-large.

Cortices Malorum conditi.

R. Corticum Malorum Citreorum in frustra oblonga incisorum quantum libueris, per dies quindecim Aqua marina committantur; educantur, postea ex illa aqua, & in Fontanam ejiciantur, in eaque sæpius renovata relinquantur, donec salsedinem deposuerint. Bulliant tandem leviter in nova aqua, ut siquid supersit salsedinis auferatur. Tunc in recenti aqua ad sufficientem ténérítatem coquantur, deinde linteo mundo quantum fieri potest exsiccari in vase novo fictili vireato ordine collocentur. Illis saccharum in proprio Corticum decocto ad debitam consistentiam coctum calide superfundatur, illiusq; coctio & superfusio repetatur, ut

Citron-Peels condited.

R. Of the Peels of Citrons as many as you please; cut them into long slices about an inch or an inch and a half broad: range them one by one in a clean Barrel, cover them with Salt-water, and leave them in that Water for fifteen days, or longer if you please; then take them out, and steep them in Fountain-water for several days, shifting and re-shifting the Water, till you can perceive nothing of saltness in them. Then boyl them gently in Fresh-water, to take away any thing of Salt that might remain. Then throwing away that water, boyl them in fresh-water, till they are sufficiently tender. Then take out the Peels out of

in superiori Radicum Eringii conditura di-
ximus.

the water, and with a Linnen-cloth dry them as well as you can. Then weigh 'em, and take twice the weight of fine Sugar, and boyl it in the last Decoction of the Peels to the thickness of Honey. Then having laid the Citron-peels one by another in an Earth'n-glaz'd-pan, pour the Sugar upon them scalding-hot, so that they may be altogether well-cover'd; leave them so for some days, and then pour out the Syrup by inclination into a Bason, and repeat Coction and Superfusion as is directed in the Conditing of *Eringo's*.

The difficulty of conditing Citron-peels without causing them to lose their shape, or so as to keep them from falling to pieces or into paste, is the reason that we are forc'd to make use of Salt-water, which preserves their Rinds entire, fair and transparent.

If you would preserve these Peels dry, take them out of the Syrup, let them drain, then boyl fine Sugar in the Water to the consistency of a solid Electuary; put in the Peels, and let them boyl till the Sugar be again gently boyl'd to the consistence of a solid Electuary. Then take out the Peels, letting the Sugar drain off, and lay the Peels upon twigs in a Stove, to be there entirely dry'd.

You may make good use of the first Syrup which serv'd to condite the Citron-peels, being very much esteem'd under the Name of The Syrup for preserving the Citron-peel, the virtues whereof are very near as good as those of the Peel, to strength'n the Heart, Stomach, and all the Noble-Parts.

You may also boyl in the Water new Citron-peel, till it be almost reduc'd into paste; beat it afterwards in a Marble-mortar, and pass it through a Hair-Sieve, adding thereto the weight of it in powder-Sugar; then boyling it over a gentle-fire in a Glaz'd-earth'n-pipkin, and at the end putting a little Juice of Citron, to give it a pleasing acidity.

In the same manner Quinces, Pears, Apples, Abricots, Peaches, Plumbs and many other Fruits may be reduc'd into Pastes of the like nature. In the same manner may the Stalks of Lettice separated from their Rind, the pulpie-part of Melons, long-Gourds, Cucumbers, Hartchoak-bottoms, and many other pithie parts of Plants be condited. You may also put them into Salt-water and condite them whole, as I have directed for Citron-peel.

You may also make use of a clear Lye instead of Salt-water to condite green Almonds. And though they become extraordinary pale, yet by boyling them afterwards in fair Water, they recover a colour more green then that which they had before, and you may then preserve them drie or liquid, without fear of altering their colour. Conditements in Honey are not so much us'd as those in Sugar, as being more acceptable in all Sweet-meats: besides that Honey is not so proper for dry Sweet-meats. And though in *Languedoc* and *Provence* during the cold weather they preserve Almonds dry with Honey, and to make a Sweet-meat sometimes red, sometimes white, which they call *Nogat*, or *Tourron*; yet it is not a Sweet-meat that can be kept long: for the Honey will give and at length dissolve altogether, when the moist air has had time to penetrate it.

The preserving of Olives is very different from all others; especially because it is done without either Sugar or Honey. Their Preparation consists chiefly in taking away their natural bitterness, to render them pleasant to the taste, and in preserving them long in their beauty and goodness. They that regard not their beauty, only slit the green Olives in two with a Knife, and bruise them gently, and soak them in fair Water, which they shift oft'n till their bitterness be almost all tak'n away. Then they put them into Pots of Glaz'd or Earth-glaz'd with some small bunches of Fennel, or some pieces of dry Citron or Orange-peel, and cover them with a Water indifferently salt, wherein they keep them to eat, as they have occasion. But they that desire to preserve the colour of their Olives, and to keep them entire, make use of a Lye made of the ashes of Oak-wood, Vine-branches or the like: or else of Quick-lime, steeping their Olives therein four and twenty hours, or till they have quite lost their bitterness. Then they put their Olives into an indifferent Salt-water, adding to them sweet Fennel, Citron or Orange-peel cut into little slices, or some such other Aromatic, as they shall like best. They also pour in as much good Oyl upon the Water as may swim about a fingers-breadth above it, the better to preserve the whole.

CHAP.

CHAP. XIII.

Of Gellies.

WE give that now-a-days the Name of *Gelly*, which the *Latins* call'd *Gelatina*. *Gelly* is usually made of Juices extracted by pressing, or by decoction of several Fruits. They are also made by the long boyl'ing of different Animals, or of their parts. These Juices must be clarify'd by Despumation or otherwise, and be sweeten'd with Sugar, to make them pleasing to the Palate. They must be also boyl'd to the consistency that a *Gelly* ought to have, which is not to be too fluid when it is cold, and not to stick to the Trencher or Plate when you drop a few drops to try the consistency. *Gelly* is so nam'd, because it is transparent like Ice, and because it congeals in the cold, and melts in the heat. However it differs from Ice, because it never becomes hard like that, but remains always soft, unless it freeze in extremity of weather.

Gellies are so common among the Ladies, that I shall only give you the Examples of two or three made by Decoction.

Gelatina Cydoniorum.

R. *Cydoniorum* ad maturitatem accedentium, lb viij. in frustra incide cum Cortice & Seminibus, & in aqua communis lb xx decoque ad dimidia circiter partis consumptionem: decoctum cola & *Cydonia* exprime. Colaturam Ovi albumine cum Sacchari lb vj. clarifica; & clarum liquorem ad *Astiva* consistentiam coque, Pixidibusque ligneis vel Vasis vitreis, aut fictilibus vitreatis reconde.

Gelly of Quinces.

R. Whole Quinces not fully ripe, and cut them into five or six slices, and weigh out eight pound, and boyl them in twenty pints of Water, to the consumption of half. Strain the Decoction, and squeeze the Sediment well; and when it is almost cold, clarify it with the white of an Egg, with six pound of fine Sugar, after the ordinary manner. Then boyl the clear liquor over a gentle-fire, to the consistency of a *Gelly*. Then take the Skillet from the fire, and when the *Gelly* is half-cold, Aromatize it with four drops of Distill'd-oyl of Cloves, and two drops of Oyl of Cinamon, incorporated first with fine powder'd-Sugar. The whole being well mix'd, and the *Gelly* well scumm'd, pour it out into Glasses, or Glaz'd-pots, or else into Woodd'n-Boxes or Moulds, moisten'd before-hand. The *Latins* call the *Gelly* of Quinces *Mivam Cydoniorum*.

This Aromatization is to be preferr'd before that of the Ancients, who direct you to put Cinamon, Cloves, Cardamoms, Saffron, Trochisques of *Gallia Moscata*, Ginger, Mastich, lignum Aloes, and Musk in powder ty'd up in a knot, and to steep them in the *Gelly* while it boyles; not considering that besides the harsh and unpleasing taste which the grosser part of all this Mixture of Drugs would give the *Gelly*, their Aromatick and volatile part would dissipate, and leave nothing behind but the ill-qualities of the Terrestrial. You may also, besides the Oyls of Cloves and Cinamon prescrib'd for Aromatization, add some drops of the Essence of Musk and Ambergrise, for those that love sweet Scents. There are some that take out the Seeds from the Quinces when they make the Decoction for the *Gelly*. Others on the contrary make use of the Seeds, Cores and Rind, reserving the pulp of the Quinces to condite, or to make Marmalate.

You may also make a *Gelly* of Rennetings or other good Apples, cutting them into quarters, boyling them in Water almost to a mash, and straining the Decoction through hair-sieve without pressing the Apples. For this Decoction thus strain'd through the Sieve revert, and re-paist through a Bag, mix'd with the weight in Apples of very fine Sugar, and boyl'd over a gentle fire to a due consistency, makes a *Gelly* as pleasant as sightly, to which you may add at the end of the Decoction some drops of the Juice of Citrons well-

clarify'd

clarify'd to give them a sharp taste. You may also cut the rind of candy'd Pome-Citron into small pieces, and lay at the bottom of the Glasses or Boxes where you put your Gellies, which being pour'd hot upon these pieces, will become by that Mixture much more acceptable then without it.

Gelatina Cornu Cervini.

R. Rasura Cornu Cervini lb ss, Aqua communis lb vij. Coque lento igne, in vase fictili vitreato, ad duarum partium consumptionem. Cola & exprime, Colaturam clarifica Ovi albumine cum Sacchari optimi ℥ vij. Vini albi ℥ iiii. Succu Citri ℥ j. Et coque igne lento ad Gelatina melioris consistentiam.

Gelly of Harts-Horn.

R. Half a pound of the shavings of Harts-horn, and boyl it over a gentle fire in six pints of Fountain-water in a glaz'd earthen Pipkin to the consumption of two thirds of the Water. Strain out the Decoction, squeezing the Harts-horn well, then clarify the straining with the white of an Egg, adding six ounces of fine Sugar, four ounces of white Wine, and one ounce of Juice of Citrons. After which boyl the clarify'd Liquor over a gentle fire, to the consistency of a Gelly, rather too soft then too strong, which you must empty hot into Glasses or Pots, and there let it cool.

You may Aromatize this Gelly with some half a drop of the Essence of Citron, Cloves or Cinamon, incorporated with fine powder'd Sugar.

This Gelly of Harts-horn is never prepar'd but upon occasion. For it cannot be kept above four or five dayes in Winter, and two in Summer; and then you must keep it in a Cellar. Some nice Persons may disapprove the boyling of the Wine and the Gelly, believing that the Spiritous part dissipates in boyling. But in regard the Gelly cannot be clarify'd without the Wine, there is no care to be tak'n for the dissipation of the Spirit, so much the rather because that the Gelly being most frequently prepar'd for those that are in Fevers, we may be glad of the dissipation of those Spirits.

Gelly of Harts-horn may be call'd a Medicinal-nourishment: For it breeds good nourishment, and strength'ns the Heart and Stomach. It is us'd in all sorts of Fevers, especially the putrid, and in all Epidemic-diseases; and is highly approv'd in all weaknesses, and want of retention in the Stomach and Bowels.

In the same manner may be prepar'd Gelly of Vipers, and of the parts of other sorts of Animals.

CHAP. XIV.

Of Conserve.

R OOTS, Herbs, or Flowers are usually the foundation of all Conserve. Their preparation therefore not being very difficult, and requiring no tedious Discourses, I will only give you two or three Examples, by which you may prepare all sorts of Conserve.

Conserve Radicum Helenii.

R. Radicum Helenii recentium mundatarum quantum libuerit; coquantur ad molliem in sufficiente quantitate Aqua Fontana; deinde pisenentur, & per Cribrum inversum trajiciantur. Decoctum coquantur lento igne cum Sacchari duplo Radicum pondere, ad Electuarii solidi consistentiam. Illique tantisper refrigerato, trajecta pulpa permisceatur; refrigerataque conserva vase idoneo recondatur.

Conserve of Roots of Elecampane.

R. What quantity you please of the new Roots of Elecampane, wash them well, and cleanse them from their little rind, and from all superfluities; cut them into great pieces, boyl them in six times their weight in Water over a moderate fire, till they are sufficiently tender. Then bruise them in a Marble-mortar with a woodd'apebble, and strain the pulp through a Hair-sieve revers'd. In the mean while boyl twice the weight of fine Sugar in the Decoction of the Roots, to the consistence of a solid Electuary; and when it is half cold, incorporate the pulp therein, and put up the cold Conserve in a fit vessel.

Some

Some let the Decoction be quite cold before they incorporate the pulp. Others put it hot into the pot, to the end there may be a crust proper to preserve the Conserve. However you must not cover the pot till the Conserve be quite cold, for fear the superfluous moisture which rises with the Conserve, not finding vent, should fall upon the Conserve and putrifie it.

This Conserve, as also that of many other Roots may be done without boiling the Roots, as also without boiling the Sugar. For you may stamp the raw Roots in a Marble-Mortar, press the pulp through a hair-sieve revers'd, and incorporate it with twice as much the weight of fine-Sugar in powder, and the Conserve shall be made. But besides that the raw Roots are more difficult to stamp and strain, and more fibrous then those which are boyl'd, the Conserve is also more displeasing and coarse. In the same manner may be prepar'd the Conserves of all pithy Roots.

Conserve of Elecampane, cuts, and powerfully loosens Flegm from the Lungs, the Reins and Stomach, it serves for expectoration, helps Digestion, and creates an Appetite. You may take it alone, or mix'd in Opiates, Loches, or Tablets: you may take from half an ounce to an ounce.

Conserva Rosarum mollis.

Rosarum Rubrarum recentium exungulatarum, lb j.
Sacchari Albissimi, lb ij.
Fiat ex arte Conserve.

Soft Conserve of Roses.

Take one pound of red Rose-buds, cut off the white part at the bottom with a pair of Scissors. Stamp them exactly in a Marble-Mortar, mixing with them by degrees, two pound of fine powder'd Sugar.

This mixture will make a body not unlike that of a soft Electuary, of a dark red colour and pleasing to the taste. You may at the latter end add some drops of Spirit of Vitriol or Sulphur, which will heighten the colour of the Conserve, and make it look more red. After this you may put it up in a bottle well-stopp'd, and expose it to the Sun for several days, stirring the Conserve from time to time with a woodd'n Spatula, the better to unite the Roses with the Sugar, and to consume the superfluous moisture.

But if you desire a Conserve of Roses more pleasant, and more slightly, this is the way. Give a gentle warble to about a pint of Rose-Water, and having tak'n it off the fire, cast into it a pound of large red Rose-buds, clean'd as before, and having well-steep'd them, strain the Liquor through a clean Linen-Cloth, squeeze the Roses with your hands, and beat them well in a Marble-Mortar. In the mean while boil two pound of fine Sugar in the Water where the Roses were steep'd, to the consistence of a solid Electuary, and when it is well boyl'd, mix the Roses therein perfectly well-stamp'd; stir them for some time the better to make the mixture, and to evaporate the superfluous moisture. Then put them up in a pot, and cover them well, when they are quite cold. This way makes the Roses very tender, and makes them fit to be the better and more easily stamp'd. The Rose-Water increases the good Scent and vertue of the Conserve: and the mixture of the Roses with the Sugar becomes more exact. The Conserve is more slightly, and retains its vertue and its beauty longer, then by the ordinary preparations.

There is also another preparation of Conserve of Roses not inferiour to this, which is done by putting the Rose-buds cut into a glass-Cucurbit, in Maceration in *Balneo Mariae*, between luke-warm and boiling hot; keeping them there till they are sufficiently tender, boiling the Sugar with the Rose-Water, and observing the same Method, as for the former Conserve.

The principal use of Conserve of Roses, is to stop defluxions from the Brain falling upon the Lungs. It is also good to stay coughing and spitting of Blood: to strengthen the Stomach, Heart, and Brain, to stay vomiting and looseness of the Belly; to keep the Breath sweet, to provoke sleep; to which purpose it is usually apply'd in a frontal to the Forehead. This Conserve is to be tak'n fasting from one dram to two, often mix'd with Confections, Powders, Essences, and other Conserves. Sometimes it is outwardly apply'd upon the Heart and Stomach in a solid Epitheme, alone, or mix'd with other Medicines.

Conserva Rosarum solida.

℞. Rosarum Rubrarum mundatarum, & ad Solis Radios celeriter siccatarum, ʒj. in Pulverem subtilem redigantur, postea irrorentur dragma Semis Spiritus Sulphuris. Tunc ℞. Sacchari Albissimi, lbj. Aqua Rosarum, ʒiiij. Coquantur simul ad Electuarii solidi consistentiam. Deinde pulvis Rosarum immisceatur, & ubi fere refrigerint, formentur Tabella vel Rotula ad usum.

Solid Conserve of Roses.

Take an ounce of red-Roses cleans'd, and hastily dry'd in the Sun, powder them very fine, and sprinkle them with half a drachm of Spirit of Sulphur in some glass-Vessel, mixing them well with a woodd'n Spatula. Then boyl a pound of fine Sugar in four ounces of Rose-Water to the consistency of a solid Electuary, and incorporate the Roses therein, being tak'n off the fire, stirring them well with a woodd'n Pestle. And when you observe a film upon the Conserve, pour it out upon a sheet of Paper, or a Pewter-platter to make Tablets thereof.

This is call'd hard Conserve of Roses, which will be of a good colour, and grateful to the taste; the vertues whereof are much the same with those of the liquid Conserve. It is also very convenient to carry in the Pocket.

They are deceiv'd who think that the Roses ought to be dry'd in the shade to make them look the fairer. For experience and reason have taught me, that red Roses so dry'd are never slightly in colour, but become very brown. And therefore it is not without cause, that you are here directed to dry them hastily in the Sun. For being suddenly dry'd they look fair and are full of vertue, because the red-Roses abound in superfluous and viscous moisture, which is not easily separated, unless it meet with some powerful Agent to constrain it; such as is the Sun by means of his heat. Whereas if you dry them in shade only, the action of the Sun being too weak, and slow, the Roses in that space of time, wither and turn black. However, you must be careful to take them out of the Sun, when they are sufficiently dry; for after that, the Sun does but burn them, and make them change colour.

You must be careful also to put the Roses in a Glass-bottle well-stopp'd to preserve them in their vertue and beauty, which you may do for a year or two together.

Conserva Violarum mollis.

℞. Violarum recentium mundatarum lbj. Sacchari Albissimi, lbj. β. Fiat ex arte Conserve.

Conserve of Violets liquid.

℞. Half a pound of new Violets very clean, and beat them exactly in a Marble-Mortar, and when they are well-beaten, boil over a soft fire in six ounces of distill'd Water of Violets, a pound and a half of fine Sugar, to the consistency of an Electuary. Then take the Sugar off the fire, and when it is half-cold, mix the stamp'd Violets therewith.

At the same time pour this Conserve into a pot, that the film or crust may grow over it, which will very much preserve it. And when it is cold cover the pot very close, and keep it for your use.

This Conserve may serve as an example for those of Burrage, Bugloss, Water-Lillies, and such-like flowers as abound in moisture.

The moisture of the Violets is the reason of putting more Sugar into Conserve of Violets, then into Conserves of Flowers less moist. And the method of boiling the Sugar is much better, then to mingle the Violets in powder with the Sugar: in regard the Flowers seem better mix'd in the boil'd Sugar, and for that by putting the Conserve hot into the Pot, the crust that grows over it resists the penetration of the Air, and makes the Conserve keep much longer.

Conserve of Violets is very cordial; It is very much esteem'd in Diseases of the Liver and Spleen. It qualifies the Acrimony of the humours, and makes them slippery. It is admirable in Diseases of the Breast, and to cool the boyling of the Blood.

CHAP. XV.

Of Syrups.

Juleps were the fore-runners and the occasion of the invention of Syrups. For the Ancients finding, that the superfluous moisture of Juleps hastn'd their putrefaction, bethought themselves of consuming it by boiling, and to reduce them to a thicker consistency, giving them the name of Syrups. The word Syrup is deriv'd from *σῆμα*, to draw, and *σῆμα*, which signifies Juice.

All Syrups are pleasant Compositions, made of Waters, Juices, Tinctures, or Decoctions boyl'd with Sugar or Honey, to a consistency somewhat thick, and fit to keep. The Juices that compound Syrups, are usually drawn from several parts of Plants, sometimes by expression, sometimes by the impression of their succulent substance into any Liquor. They may be also drawn from the parts of Animals, as Syrup of Tortoises. Tinctures, Infusions, or Decoctions, made use of in the composition of Syrups, are as so many means, to impart the virtues of different Medicines to the same Syrups.

Besides the design of long-keeping, our Artists had a desire to have the vertue of one or more Medicaments clos'd together in a small Room. But the number of Syrups is so great, that should we prepare them all, the shops would not be big enough to hold them. For which reason I shall not fill this Volumn with Syrups that may be let alone, as being out of use, or such as may be prepar'd when prescrib'd. I shall only therefore here set down such Syrups, the use whereof is confirm'd by the practice and prescriptions of the Physicians, and which deserve to be prepar'd for their virtues, and advantages which the sick receive thereby.

Syrupus e Succo Citri.

Rx. Succo acidis recentis defacatissimi Malorum Citreorum,
Sacchari Albissimi,
Fiat ex arte Syrupus.

℥b iij.
℥b vi.

Syrup of the Juice of Citron.

Take three pints of the Juice of Citron extremely well purify'd, and put it into a Glass, or glaz'd Earth'n Vessel, then dissolve therein six pound of fine Powder Sugar; stirring it all the while till the Sugar be wholly incorporated with the Juice.

Continue stirring as well when it is off, as when it is upon the fire.

Make use of no Vessels for the Preparation of this or any other Syrup compos'd of Acid Juices, but such as are made of glass, or glaz'd Earth.

There is another way of making this Syrup, by taking six pound of white and dry fine Powder Sugar, clarifying it with the white of an Egg, and six pints of Fountain-water, and then boiling it over a fire, to the consistency of a solid Electuary; and after that, when it is off from the fire, pouring into it three pints of Juice of Lemons, well-clarify'd, and stirring the Syrup with a Woodd'n Pestle, till it be almost cold.

The Ancients believ'd that the quantity of the acid Juices of Fruits in Syrups, ought to be greater then that of the Sugar, and that the same Juices requir'd a longer boiling, as well to consume one part of their moisture, which they thought superfluous, as also to make a consistence necessary for the Syrups which were compos'd of them. For this reason they boil'd their Juices a long time. I confess that the acid Juices evaporated in a glass-Vessel in *Balneo Maria*, do lose of their aquosity, and that the Juice which remains in the Vessel, is more acid, then the Juice before the watry part was evaporated.

But besides that, there is no need of so much Acidity, they lose of their beauty, and become less cooling by being boyl'd. Moreover the watry part is not unprofitable in the composition of these Juices, in regard it is very refreshing, and for that by the means thereof, the acids are more conveniently convey'd to the remote parts, without any offence to the parts, by reason of their Acrimony.

And for as much as the Syrups, which are only compos'd of acid Juices and Sugar, require not a consistency altogether so thick as that of other Syrups, they must not be kept

so long upon the fire, for fear of changing their quality. This Syrup may serve for an example for all Syrups compos'd of the acid Juices of Fruits, and Sugar.

Syrup of Citrons cools and moistens very much, it quenches thirst, and sensibly cools the heat of cholerick-Fevers. It strengthens the Stomach and Bowels, weak'nd by the hot intemperature of humours, it resists putrefaction and contagious Air. It is good against Worms, Poyson, and Pestilent and Epidemic Diseases. The Dose is usually from half an ounce to an ounce, in a glass of Ptisan, or some other Liquor. It serves as a foundation for some compositions, and is mix'd in Potions and other Medicines.

The Syrups of Granates, red-Currans, Barberries, Verjuice, and the like are prepar'd after the same manner.

Syrupus e Succo Oxytriphylli.

Rx. *Succi Oxytriphylli depurati,*
Sacchari Albissimi, ana.
Fiat ex arte Syrupus.

℥ iiij.

Syrup of the Juice of Wood-Sorrel.

Take four pints of the Juice of Wood-Sorrel well-purify'd; pour them into a glass-Cucurbit, cover it with its Alembic slightly luted, place it in *Balneo Mariae*, and distil with a moderate fire about half the moisture. Then take away the *Cucurbit*, and let it cool. That done, pour out the acid Juice, which remains by Inclination, and pass it through a brown-Paper, to separate the Terrestrities gather'd in Distillation. Then weigh out two pints of this clarify'd Juice, and dissolve therein four pound of fine powder'd Sugar, and give the whole a little wamble over the fire. Take it off, scum it, and put up the Syrup, when it is cold.

You may also clarify the fine powder'd Sugar with the white of an Egg and fair Water, boil it to the strong consistency of a solid Electuary, and afterwards incorporate the Juice of Wood-Sorrel prepar'd as I have said, and make a Syrup as you do of the Juice of Lemons.

Wood-sorrel, otherwise call'd *Oxytriphyllum*, and *Allelujah*, is a Plant well-known. If the Juice were as acid as that of Citrons, two pints of Juice would be enough for the four pound of Sugar prescrib'd. But because it is much less acid, and much more watry, there is a necessity of separating by distillation one part of its aquosity, to make its acidity somewhat like that of the Juice of Citrons.

The Syrup of *Allelujah* cools very much. It is very useful to quench thirst, to cool the heats of the Stomach and Liver. It is very much commended in Burning-Fevers, Malignant and Epidemic Distempers. It comforts and strengthens the Heart, and cures the Inflammations of the Mouth, Tongue, Palat, and Throat. The distill'd-Water of the Juice may be very properly mix'd with the Syrup, or you may drink the Water alone. The Dose is the same with that of the Syrup of Citrons.

Syrupus Cinamomi Regius.

Rx. *Aqua Cinamomi stillatitia supra novum Cinnamomum electum cohobata & iterum distillata,* ℥ j.
Sacchari Albissimi in aqua Melissa soluti & in Electuario solidum cocti, ℥ ij.
Fiat ex arte Syrupus.

Royal Syrup of Cinamon.

Take two pound of very fine Sugar, and boil them in eight ounces of Balm-water, to the consistence of a solid Electuary, and when it is almost cold, mix it with the Cinamon-water, and put up the Syrup in a bottle well-stopp'd.

The Preparation of the Cinamon-water, which is the foundation of this Syrup, is to be seen in the Third Part of this *Pharmacopœa*, whither I refer the Reader.

Cinamon is the Rind of a tree, as big as an Orange-tree, which grows in the Island of Ceylon in the East-Indies. The branches spread out of the body very streight, thick, in good order, and without knots. They cut those branches from the Trunk, when the Tree

Tree is in sap, and take off the Rind, which is the true Cinamon, which at first is flat, without colour, and having little taste or smell: but as it dries it rolls up like a Parchment, and losing its superfluous moisture, which stifled the best part of its good qualities, recovers its pleasing and penetrating smell, and its no less agreeable and biting taste. The best is of a pale purple brisk colour, smooth within and without, and of a substance indifferently compact. It is not subject to rottness, for it will keep a long time, provided it be well put up. The Wood is without any considerable vertue, no more then the Flowers which are white and sweet-scented, and follow'd by a Fruit in shape and bigness much like an Olive, which are full of a green, sharp, bitter-oylie Liqvor, but little regarded.

The Syrup of Cinamon is a Cordial that operates quickly. It is administred successfully in weakneses and sounding fits, to recall the dissipated Spirits. It very much strengthens the Stomach, and the Brain, and all the Noble-parts. It stirs up the Appetite, helps Digestion, expels Wind, sweetens the Breath, facilitates the Travels of Women, provokes the *Menstruums*, and remedies Obstructions of the Matrix. You may take from two drams to an ounce, either in a Spoon, or mix'd with Opiates, or other Medicines.

Syrupus Coralliorum.

*Rx. Coralliorum rubrorum in subtilissimum
pollinem supra Porphyritum redactorum, ℥ iiij.
Succi Berberini defecatissimi, lb iiij.
In Cucurbitam vitream immissa in Balneo
Cinerum horis quadraginta stent, per vices
Spatulâ lignâ agitando; Deinde filtretur
Liquor, & cum Sacchari Candi subtiliter pul-
verati duplo pondere fiat in Balneo Mariae mo-
deratè calido ex arte Syrupus.*

Syrup of Coral.

Take four ounces of red Coral well-cho-
sen, break it upon a Porphyrie-stone till
it be reduc'd to perfect dust, moistning it
now and then with Rose-water. When it
is dry, put it into a glass-Cucurbit, and
pour upon it three pints of Juice of Bar-
berries well-clarify'd; put the Cucurbit in
a Bath of Ashes moderately hot, for forty
hours, stirring the Ingredients from time
to time with a Woodd'n-Spatula. Then
filter the Liquor through a brown-Paper;
weigh it, and having return'd it into a glass-
Cucurbit very clean, and set the Cucurbit
upon a luke-warm *Balneo Mariae*, dis-
solve in this Liquor double the weight of
fine Sugar-candy finely powder'd. When
the Syrup is cold put it carefully up in a
glass-bottle.

Coral, call'd also *Lithodendron*, or the Petrify'd Tree, is tak'n by some for a Mineral, by reason of the hardness of its substance resembling that of stone; but it may pass for a Plant among those that consider how it grows like a Plant in the bottom of the Sea. Nevertheless, we are not to credit those who have affirm'd that Coral fructifies, and brings forth Berries, for which they took the Grains of Coral rounded about. No more then to those that believ'd that Coral was soft in the place where it grows, and that it grows red and hard, when it is tak'n out of the Sea, and expos'd to the Air. For they that fish for it have assur'd me, that it neither bears Berries, nor Seed, and that it is of the same colour, and as hard at the bottom of the Sea in every part of the Plant, as when it is drawn up. I confess there are three sorts of it, red, black, and white; but without question, the red surpasses all the rest in vertue. It must be of a lively colour, pure and clean, solid, weighty, smooth, and easie to break.

The Syrup of Coral is commended against all weakneses of the Stomach, Liver, and Bowels, and for the cure of Diseases that proceed from thence, particularly to stay Vomitings, Diarrheas, Dysenteries, Lienteries, Hepatic Fluxes, to stop the loss of Blood in Men and Women, at Mouth, Nose, or any other part. The Dose is from half an ounce to an ounce, to be tak'n alone in a spoon, or with other convenient Liquors.

Syrupus Cydoniorum.

℞. Succī Cydoniorum purissimi,
Sacchari Albissimi, ana. ℞ iij.
In vase fictili vitreato, lento igne, ad Sy-
rupi Consistentiam coquantur. Removetur ab igne
& semi-refrigeratus Syrupus si libuerit aro-
matizetur Oleorum Cinnamomi & Caryophyllo-
rum an. guttis, Saccharo pulverato prius ex-
ceptis.

If you would prepare a Syrup with less Juice of Quinces, and by consequence less astringent. You may prepare this Syrup in the same manner as that of Lemons, and put but one pint of Juice of Quinces to two pound of Sugar. But because astringent is chiefly expected from the fore-going Syrup, the quantity of the Juice must be equal to that of the Sugar, according to the prescription. For thereby the Juice finding it self concentr'd and despoil'd of the greatest part of its superfluous moisture in the boiling, which was necessary to bring it to the consistency of a Syrup, renders it more astringent, and fit for the use to which it is design'd.

The vertues of it being to restore the weakened force of the Stomach, to stay vomit-
ting, to help Digestion, to create an Appetite, to digest bad humours, and to fit them
for expulsion. It strengthens the Bowels, and is us'd with success in Lienteries, Diar-
rhœa's, and all sorts of Fluxes of the Belly, caus'd by acrimonious humours, or weak-
ness of the Parts. The usual Dose is an ounce. It may be tak'n alone, or mixt in Poti-
ons, or in a Pilsan to drink at any time.

Syrupus Antepilepticus, D. D.

D' Aquin.

℞. Viscī Quercī
Radiciſ Paonia majoris,
Seminis ejusdem, ana. ℞ ij.
Radiciſ Valeriana majoris,
Angelica,
Imperatoria,
Iridis Ilyrice,
Dictamni Alb. ana. ℞ j.
Foliorum Betonica,
Ruta,
Florum Lilly convallium,
Tilia, &
Lavendula, an. M. j.
Tartari Alb. Mompeliensis pulverisati, ℞ jss.

Syrup against Epilepsie, D. D.

D' Aquin.

℞. Mistleoe of the Oak,
Roots of bigger Piony,
Seed of the same, an. ℞ ij.
Roots of the bigger Valerian,
Angelica,
Mallowwort,
Ilyrian Orrice,
White Dittany, an. ℞ j.
Leaves of Betony,
Rue,
Flowers of the Lilly Convally,
Linden-tree, and
Lavender, an. M. j.
White Tartar of Mompelire pulve-
riz'd. ℞ jss.

Bruise the Mistleoe, as also the Roots and seeds of Piony, beat the Tartar in a Mor-
tar, shred the Leaves of Betony and Rue, and put them together with the Flowers into
a Matrafs of a sufficient bigness. Then pour upon them three pints of the distill'd Wa-
ter of black-Cheries, and as much of the Water of the Flowers of the Linden-Tree,
and stopping up the Matrafs keep it twenty-four hours in a luke-warm *Balneum*
Maria; then let the Bathe boyl two or three hours. After which having drain'd and
squeeze'd the whole, clarify the Liquor with the white of an Egg, mixt with four pound
of Sugar, and boyl it to the consistency of a Syrup, which done, aromatize it with
Oyls of Cinamon and Lavender, an. three drops, and keep the Syrup in a Glas-
bottle.

This

This Syrup is not only proper for the Epilepsie for which it is design'd, but for all Diseases of the Brain. The usual dose is one ounce alone, or in some Cephalic-liquor. It may be mingl'd also in Potions, Opiates, and many other Liquors.

Syrupus Hydragogus, D. D.
D'AQUIN.

R. Radicum Mechoacan,
Ireos Nostratis,
Ebuli Recentis,
Medulla Seminis Carthami,
Folliculorum Senna Orientalis,
Foliorum Soldanella siccorum, an. 3jß.
Turbit Gummosi,
Hermodactylorum,
Jalape,
Rhei Electi, an. 3vj.
Radicum Valeriana major.
Eringii,
Enula Campana,
Assari,
Corticis Rad. Capparis,
Tamarisci,
Santali Citrini,
Seminis Ebuli,
Baccarum Juniperi, an. 3ß.
Foliorum Ceterach,
Agrimonie,
Chamedryos,
Florum Geniste, an. M.j.
Limatura Chalybis nodulo inclusa,
Tartari alb. Monspel. contusi, an. 3ij.

A Syrup to draw forth watry humours,
by Monsieur D'AQUIN.

R. Roots of Mechoacan;
French-Orrice,
Vulgar Dwarf-Elder,
The Pulp of the Seed of Carthamum;
Seed-Bag of Eastern Senna,
Dry-leaves of Sea-Bindweed, ana. 3jß.
Gummie-Turbit,
Hermodactyles,
Jalap,
Pick'd Rhubarb, an. 5vj.
Roots of the Bigger Valerian,
Eringo's,
Elecampane,
Asarabacca,
The Bark of the Root of Capers,
Tamarisk,
Yellow-Saunders,
Seed of Dwarf-Elder,
Juniper-Berries, an. 3ß.
Leaves of Ceterach,
Agrimonie,
Germander,
Flowers of Broom, an. M.j.
Filings of Steel ty'd in a Bag,
White Monspelier-Tartar, an. 3ij.

Break the Yellow-Saunders, bruise the Roots, Barks, Berries and Seeds, beat the Tartar in a Mortar, shred the Senna-bags, put the Filings of Steel in a little Linnen-cloth slightly ty'd, and having put them all into a Cucurbit of Earth well-glaz'd within, mingle the Flowers with the rest. Then pour upon them two pints of Succorie-water, and of the Juices of the Roots of Elder, and Leaves of Chervil well-clarify'd, of each three pints, so that the Ingredients may steep in the Liquors; cover the Cucurbit, and set it over hot embers for four and twenty hours; at the end whereof boil the whole for an hour and a half. Then drain and squeeze them strongly out, and having clarify'd the Liquor with the white of an Egg with 4 pound of fine Sugar, boil it again over a soft fire to the consistency of a Syrup, adding at the end of Tartar-vitrioliz'd and Sal-Polychrestes, ana 3ij. When it is cold, aromatize it with three drops of Distill'd-oyl of Cinnamon incorporated with an ounce of fine-powder'd Sugar.

Eastern-Senna is accounted the best; the Leaves are like those of bastard-Senna, but more pointed and longer. The least bruis'd, the freest from sprigs and dead leaves is always the best: it ought to be of a pale-green colour, soft to feel, of a strong scent, but not displeasing. The Flowers are small and yellow, like those of Bastard-Senna. The Seed-bags are the Cods, which the Plant produces, flat, light, like a half-Moon, broad and long, about half a finger's breadth, of a pale-green colour inclining to red. They contain the Seed, pale-green, long and flat, resembling a Heart. But the Bags are more purgative than the Leaves, and more proper to purge Waters.

Turbit is the Bark of a Milkie-root, which is chos'n by its weight, dark-colour'd without, white within, and clean from its pith, which is hard and fibrous. The mark of Gum is but fictitious and added to it; for that little Gum that is in it cannot be perceiv'd till the Turbit in powder has been macerated in Spirit of Wine, and so dissolv'd and separated from its grosser parts.

Mechoacan is a great and almost insipid Root, of an alb-colour without, whitish within, brought in slices from New-Spain, where it grows in the Island of Mechoacan. The newest is to be chos'n.

A Hermodactyle is a little Root made like a Heart, reddish without and very white within; of a heavy and close Substance, but easily powder'd, about the bigness and somewhat resembling *Anacardium*, or the Roots of *Satyron*: The whitest, fullest grown, and without Worm-holes is to be chos'n.

Jalap grows in *New-Spain*. A Root about the bigness of *Mechoachan*. It is brought to us in little round pieces, of which the newest, most weighty, and gummy are the best.

The best Rhubarb is of a firm-weighty Substance, spotted with red when it is brok'n, of a bitter-astringent taste, and a good scent.

They that will be so curious as to examine the qualities and quantities of all the Simples prescrib'd by the Chief Physician to his Majesty of *France*, for the Composition of this Syrup, will have no reason to question the vertue thereof in purging ferous humours from all parts of the Body, particularly *Hydropical*, for the cure whereof it was chiefly study'd.

It may be giv'n alone from one ounce to two in proper Liquor.

Syrupus Anti-Nephriticus, D. D.
D'AQUIN.

R. Radicum *Altheæ*,
 Ononidis,
 Fragariæ,
 Bardanæ,
 Nymphææ,
Quinque Aperientium, an. ʒjß.
Fructuum Alkekengi,
Cynosbati, an. ʒij.
Seminum Bardanæ,
 Milii Solis,
 Sileris montani,
Quatuor Frig. major mundat.
Nucleorum Mespillorum & Persicorum,
an. ʒj.
Foliorum Saxifragæ,
 Pimpinellæ,
 Ceræfolii,
 Virgæ Aurææ,
 Hyperici,
 Capilli Veneris, an. M.j.
Tart. albi pulverati, ʒij.

A Syrup against Gravel, and pains in the
Kidneys, by D. D'AQUIN.

R. Roots of *Althea*,
 Rest-Harrow,
 Straw-berries,
 Burdock,
 Water-Lilly,
Five Openers, an. ʒjß.
Fruit of Alkekengi,
Sweet-Bryer, an. ʒij.
Seeds of Burdock,
 Grommel,
 Lovage,
Four Greater Cold-seeds cleans'd,
Kernels of Medlars and Peaches,
an. ʒj.
Leave of Saxifrage,
 Pimpernel,
 Chervile,
 Gold'n-Rod,
 St. John's-wort,
 Maidenhair, M.j.
White Tartar pulveriz'd, ʒij.

After you well wash'd and cleans'd all the Roots from their external and internal superfluities, and bruise'd and slic'd them well, put them into an Earth'n-pot glaz'd within-side, with two ounces of *Montpelier-Tartar* pulveriz'd; and having pour'd upon them ten pints of the Distill'd-water of *Pellitory of the Wall*, let them boil over a soft fire for the space of a good hour: After which add to the Decoction the Fruits of *Sweet-Bryer* and *Alkekengi* well-cut, and boil them a quarter of an hour among the Roots; then add to them the Seeds of *Burdock*, *Grommel* and *Lovage*, slightly pounded, and the Leaves of *Chervile* and *St. John's-wort* cut. Boil the whole about a quarter of an hour, after which put in the *Maidenhair*; and having put them down into the Decoction, cover the Pot, take it off the fire, and when the Decoction is half-cold, drain and squeeze it out. Then clarify the Liquor with the white of an Egg with four pound of fine Sugar, and boil them over a soft fire to the consistence of a Syrup. When it is cold, aromatize it with six drops of Distill'd-oyl of *Anise*, incorporated with an ounce of fine-powder'd Sugar, and put up the Syrup in a Bottle well-stopp'd.

The Diuretic vertues particularly known to belong to every one of the Simples made choice of for the Composition of this Syrup, demonstrate the good effects which may be expected from their union. Nor can we otherwise believe but that this Syrup will give considerable ease to those that are troubl'd with Gravel in their Reins, Ureters or Bladder, or any thick or viscons flegm, which stopping the Urinary-pipes, stops the ordinary course of the Water; or to those that are subject to relapse into these Distempers.

of the Spiritous-water, which they took so much care to preserve. Whereby the deficiency of their Preparation easily appears.

Yet I must confess the Ancients might have done better with less trouble, had they gone according to the prescription here set down. For though we cannot boast by this means to preserve all the Spiritous parts of the Wormwood, Roses and Spike-nard, no more then those of the Wine; nevertheless a good part are retain'd, and the addition of the Distill'd-oyl of Wormwood sufficiently supplies the defects of those Spirits which the Wormwood lost in Distillation. Besides all this, the green-sowre-wine, which we use instead of the ripe-wine prescrib'd by the Ancients, the unripe Quinces, and the Tartar being order'd as we have done, the Acid part which abounds in all these, uniting with the fixt Salt of the Tartar it self, will stop the motion of the greatest part of the volatile Spirits which were subject to dissipation, and enable them to resist the heat of the Infusion and Decoction. And these volatiles thus retain'd, finding themselves joyn'd to the terrestrial and fix'd parts of the other Medicaments, will be able to second and assist their operation: which they will do more powerfully, when they meet with the sulphuric parts of the Distill'd-oyl of Wormwood.

But to satisfy those who believe that all the spiritous part of Wine is absolutely necessary in this Syrup, and fear that the Coction may have dissipated some parts; That dissipation may be supply'd by adding to the Syrup, boyl'd a little more then ordinary and cold again, two ounces of the Tincture of the tops of Wormwood, drawn with the Spirit of Wine. Which re-inforc'd by the Oyl, will render the Syrup much more effectual.

If the Greater Wormwood be too bitter, you may make use of the Lesser for Persons that are more nice, observing still the same Preparation.

Spike-nard is brought from the *East-Indies*. It is a Root that shooteth up many hairy-spikes set together of a brownish-colour. There is nothing appears above the ground but the stalk, for the spikes grow even with the Earth, about an inch and a half long, of a strong scent, like that of *Galingale*, the taste whereof is bitter and biting.

Syrup of Wormwood strength'ns the Stomach and Liver, creates an Appetite, helps digestion, kills Worms, corrects the acidities of the Stomach, expels winds, fortifies the Bowels, stops Loosenes, and is profitable in Hysteric-distempers. The dose is one or two spoonfuls in a morning fasting, either unmix'd, or in Wine, or any other proper Liquor. It is also us'd in Potions, Opiates, Pills, and several other Medicaments.

Syrupus de Althæa.

℞. *Radicum Althæa*, ʒij.
Graminis,
Asparagi,
Glycyrrhizæ,
Uvae ursi,
Cicerum rubrorum, an. ʒj.
Summitatum Althæa,
Malvæ,
Parietariæ,
Pimpinellæ,
Adiantum vulgare,
Capilli Veneris Monspeliensis, an. Mj.
Quatuor Semin. frigid. Minorum, &
Majorum, an. ʒij.

Syrup of Marsh-mallows.

℞. Roots of Marsh-mallows, ʒij.
Meadow-grass,
Asparagus,
Liquorice,
Raisins of the Sun,
Red Cich-pease, an. ʒj.
Tops of *Althæa*,
French-Mallows,
Pellitorie of the wall,
Pimpernel,
Common Maidenhair,
Monpelier-Maidenhair, an. Mj.
Four Lesser Cold-seeds
Greater, an. ʒij.

Wash and cleanse the Roots of *Althæa*, *Asparagus* and *Meadow-grass*, from their dirt, pith and strings, slice them well; and having boil'd the Grass-roots a good quarter of an hour first in 8 pints of Water, put into the Decoction the slic'd-roots of *Althæa* and *Asparagus*, and let them boil foundly for half an hour; then add the dry Raisins cut, and the Cich-pease whole; when they have boil'd a little while, put in the tops of the *Mallows*, *Althæa*, *Pellitorie* and *Pimpernel* slightly shred, and boil them about a quarter of an hour among the rest: after that add the *Liquorice* slic'd, and the *Maidenhairs* cut, and when they begin to boil, put in the Cold-seeds: thrust them down into the Decoction, and take the whole off the fire, and let them drain a quarter of an hour afterwards. Then clarify the Liquor with the white of an Egg and fourpounds

of

of Sugar, and let them boil over a moderate fire to the consistence of a Syrup, a little more then ordinary. Stir the Syrup softly from time to time, the better to evaporate the superfluous moisture, and put up the Syrup when it is quite cold.

This Preparation differs from that of *Fernelius* and some other Writers; the quantity of the Roots and Raisins being here chang'd from half an ounce to an ounce; the Plantain is left out, and eight pints of Water prescrib'd instead of six. All which quantities are too small for four pound of Sugar. And Plantain known to be an astringent herb, is not to be admitted among opening, slippery-making Roots. And ten pints of Water are but little enough to extract the virtues of so many Medicaments, and yet retain the just consistence of a Syrup.

Some think this Preparation impossible, by reason of the viscosity of most of the particular Ingredients; but they that observe my method, will find not only the possibility, but the success which they suspect.

The Cich-pease are prescrib'd whole, because their opening quality abounds enough without-side without being brok'n: which if they should be, their terrestrial part being op'n, might prevail above their aperitive Faculty.

Some would have the Roots, Herbs, and other Ingredients put into a little Bag, and so boil'd, believing their Mucilaginous part would remain in the Bag; by which means the Syrup would be less viscous, and more easily prepar'd. But the difference of the Substances requires different degrees of boiling; and therefore it would be ill-done to boil them one among another equally, whereby the virtue of the one might be dissipated before the virtues of the other were fully imparted to the Liquor: besides that there be others whose terrestrial parts would remain in the Syrup, especially the Cich-pease. And then again, though all the Ingredients were of the same nature, it would be a difficult thing for them, being so stopp'd up, to communicate their virtue equally; which in regard it could not be done otherwise then by squeezing the Ingredients, would render the Syrup more mucilaginous.

Syrup of Althea is very much esteem'd for discharging the Reins and Ureters of gravely-flegmatic and tenacious Substances. For it moderately op'ns and makes all the passages slippery; tempers the sharpness of them, as well as of the Urine it self: and cools the heat that burns in the passages. It is no less commended in Diseases of the Breast, and Gonorrhoeas. It is to be tak'n fasting, alone, or in Decoctions, Emulsions, Whey, White-wine, &c. The usual dose is an ounce, though you may take two up on occasion.

Syrupus Aperiens Cachecticus; D. An Opening Syrup against ill-habit of Body, by Monsieur D'Aquin.

R. Radicum Apii,
Foeniculi,
Petroselinii,
Rubie Tinctorum,
Aristolochie tenuis, an.

R. Roots of Parsly,
Fennel,
Stone-Parsly,
Dyers-Madder,
Thin-Birthwort, an.

℥ij.

℥ij.

Wash and cleanse the Roots of Parsly, Fennel, Stone-Parsly, Madder and Birthwort, and having bruise'd them and put them into an Earth'n-vessel glaz'd within, with a streight mouth, moist'n them with Vinegar of Squills, and having cover'd the Pot, keep them in maceration 24 hours in some hot place, as over a Baker's Oven; then let them boyl over a gentle fire in eight pints of water, where Steel has been quench'd, to the consumption of the fourth part. Then

R. Foliorum Arthemisiae,
Abstinibis,
Agrimoniae,
Pulegii,
Chamadryos, an.
Ruta,

R. The Leaves of Mugwort,
Wormwood,
Agrimonic,
Penny-royal,
Germander, an.
Rue,

Mj.
M℥.

M. j.
M℥.

Shred them and put them in, and when they have boyl'd about a quarter of an hour among the Roots, add thereto

Infuse,

*Injice, Epithymi,
Florum Matricaria,
Chamomilla,
Hyperici, an.*

P. ij.

Dodder of time,
Flowers of Featherfew,
Camomile,
St. John's-wort, an. Little Hand-
fulls, ij. •

After some few bubblings, take it off the fire, strain and squeeze out the whole; clarify the straining with five pound of Sugar, and boyl them over a gentle fire to the consistence of a Syrup.

Si purgantem cupias,

R. *Rhubarbari electi minutim incisi,*
Foliorum Orientalium, an. 3j.
Radicum Jalapa,
Mecchoachana,
Hermodactylorum, &
Brionia alba contusarum, an. 3j.
Tartari Vitriolati, 3vj.

If you desire it purgative, boyl it still to the consistence of a soft Electuary. Then

R. Choice Rhubarb small cut,
Indian-Leaves, an. 3ij.
Roots of Jalap,
Mecchoachan,
Hermodactyles, and
White Bryony bruised, an. 3j.
Tartar-vitrioliz'd, 3vj.

Infuse all these in a Glaz'd-earthen-vessel for four and twenty hours over hot embers in three pints of Balm-water, and let them boyl about a quarter of an hour. Strain and press out the Infusion, and clarify the Liquor. Then mixe it with the Syrup boyl'd to the consistence of a soft Electuary, and boyl it again to the consistence of a Syrup. When it is cool, aromatize it with four drops of Oyl of Cinamon incorporated with half an ounce of fine Sugar, or with as much of the Tincture of Saffron; then put it up and stop it well.

This Syrup is a collection of choice Medicaments, which has had good success in opening obstructions of the Liver, Spleen, Mesenterie and Matrix. It purges gently viscous and tenacious humours, which are the original of Catheries, Dropsies and quotidian Agues. It is very proper to cure pale Complexions, and against suppression or irregularity of the *Menstruum's*. And though the Chalybeat-water does but a very little matter augment the vertue of the Syrup, yet you may re-inforce it with Tincture, Salt or Vitriol of Mars, if there be occasion.

Either of these Syrups the first or the Purgative, may be tak'n alone, or mix'd with Distill'd-waters or White-wine, or any proper Decoction, from one ounce to two.

Syrupus de Arthemisia.

R. *Radicum Apii,*
Feniculi,
Petroselinii,
Emula Campanæ,
Ireos Nostriæ,
Paonia, &
Rubia major, an. 3j.
Foliorum Arthemisia,
Pulegis,
Calaminthæ,
Origani,
Melissa,
Dittamni Cretici,
Sabina,
Perficaria,
Majorana,
Chamadryos,
Chamapityos,
Hyssop,
Hyperici,
Ruta,

Syrup of Mugwort.

R. Of the Roots of Parsly,
Fennel,
Stone-Parsly,
Elecampane,
French-Orrice,
Peonie, and
The Bigger Madder, an. 3j.
Leaves of Mugwort,
Peny-royal,
Calamintæ,
Organy,
Balm,
Cretan-Dittany,
Savine,
Arfmarit,
Marjorant,
Germander,
Ground-Ivy,
Hyssop,
St. John's-wort,
Rue,

Marr.

Marricaria floridæ,
Centaurei minoris,
Betonica,
Præstii albi, an.
Seminum Anisi,
Feniculi,

Dauci,
Petroselin,
Ocymis,
Ruta, an.
Tartari albi Montpelienfis,

Double Featherfew,
 Lesser Centaurei,
 Betonie,
 White-Horehound, an.
 Seed of Annise,
 Fennel,
 Wild-Carrot,
 Stone-Parley,
 Basil,
 Rue, an.
 Tartar white of Montpellier,

Wash cleane and bruise all the Roots, and infuse them with the Tartar pulveriz'd four and twenty hours over hot embers in an Earth'n-glaz'd vessel well-cover'd, in three pints of clear Hydromel newly made. Cut the Herbs and bruise the Seeds, and put them in another Earth'n-glaz'd-pot by themselves in ten pints of the same Hydromel, covering the Pot and setting it upon hot embers for twelve hours. Then boyl the Infusion of the Roots over a gentle fire for half an hour. Having so done, mixe the Infusion of the Herbs with it, and boyl both together for a good quarter of an hour. After that take the Decoction from the fire, and when it is half-cold, strain and squeeze it well, and having clarify'd the Liquor with the white of an Egg in five pounds of Sugar, boyl them over a moderate fire to the consistence of a Syrup, and aromatize it with six drops of Distill'd-oyle of Cinamon, incorporated with an ounce of fine powder'd Sugar. But this mixture must not be made till the Syrup be quite cold.

Hydromel is preferr'd before Water and the powder'd Tartar added, as well the better to penetrate the Ingredients, as to bind their volatile parts, and to hinder dissipation during the Decoction. The Aromatization of the Syrup with Oyl of Cinamon is beyond the method of the Ancients, who were wont to boyl the Cinamon in their Decoctions, not considering that the sulphuric and volatile parts of the Cinamon dissipate in boyling, and leave in the Decoction only some terrestrial parts of the Cinamon, inferior to the smell and sharp and penetrating taste of the Oyl of Cinamon.

The Preparation of this Syrup is different from those which may be met with in several Pharmacopœas: But you will find that the change is much for the better, and that I have observ'd the best rules of Pharmacy.

This Syrup is chiefly made use of in the Diseases of Women: to open obstructions of the *Matriæ*, to dispel Wind, to repress vapours and to quiet suffocations, as also to provoke and regulate the *menstruum*, and evacuate the impurities of the *Matriæ*. It is good against obstructions of the Spleen, Liver and Bowels, as well for Men as Women. The dose is from one ounce to two, alone, or in White-wine, in Opening-waters or Decoctions. It is also sometimes mixt in Pills, Opiates and other Medicines.

Syrupus de Cichorio compositis cum Rhabarbaro. **Syrup of Cichorie compounded with Rhabarbar.**

Hordei integri,
Radichum Apii,
Feniculi,
Asparagi,
Tartari albi crudi, an.
Foliorum Cichorii,

Taraxaci,
Endivia,
Sonchi Levis,
Lactuca Scariola, &
Sylvestris Spinæ in dorso ferentis,
Hepatica,
Fumaria,
Lupuli, an.
Capill. Ven. Montpelienfis,
Polytrici,

Whole Barley,
 Roots of Parley,
 Fennel,
 Asparagus,
 Raw white Tartar, an.
 Leaves of Cichorie,
 Dandelion,
 Endive,
 Smooth Sow-thistle,
 Gard'n-Lettice, and
 Wild-Lettice with prickles,
 Liverwort,
 Fumitorie,
 Hopps, an.
 Venus-Hair of Montpellier,
 Gold'n-Maidenhair,

Adiantum vulgare,
Ceterach,
Glycyrrhiza,
Baccarum Alkekengi,
Semina Cuscuta, an.

Common-Maidenhair,
 Spleenwort,
 Liquorice,
 Alkekengi-Berries,
 Dodder-seed, an.

3vj.

3vj.

First boil the Barley whole with the Tartar beat'n to powder in ten pints of Water for half an hour, then adding the Roots of Parsly, Fennel and Asparagus, well-cleans'd from dust and pith, and slic'd or bruis'd, let them boil another half hour; next put in the Alkekengi-Berries bruis'd, and the Herbs cut, and boil them a quarter of an hour among all the rest: After that put in the Liquorice cleans'd and slic'd, the Dodder-seed, and the Maiden-hairs, and having let them boil a little while, take the Decoction from the fire, and when it is half-cold, strain and press it forth. Clarify it with the white of an Egg with six pound of Sugar, and boil it over a moderate fire to the consistence of a Syrup between soft and solid.

Interim,

In the mean time,

R. Rhubarbari electi incisi,
Tartari albi Moscop.
Spica Narda,

3vj.

R. Of choice Rhubarb cut,
 White Tartar of Moscopelien,
 Spikenard,

3vj.

3j.

3vj.

Infuse them in three pints of the Distill'd-water of Succorie in an Earth'n-glaz'd-pot, narrow-mouth'd and well-cover'd over hot coals for 24 hours; then let them boyl a few durlings, and having strain'd and press'd the whole, and clarify'd the Liquor with the white of an Egg and four ounces of white Sugar, put this to the Syrup, while it is hot; and if it be not then thick enough boyl it on to a good consistence, and put it up when it is quite cold.

Some there are that reserve a part of their Decoction to infuse the Rhubarb and Spikenard into it. But considering that a Liquor charg'd with the virtue of so many Ingredients is not in a condition to receive a new that of the Rhubarb and Spikenard, and that of necessity it must leave a good part in the Sediment, certainly the Succorie-water here prescrib'd, is much more proper at this time, not being pester'd with any other qualities than what is natural to it.

There is no Syrup more in use in all places than this of Succorie-compos'd: Though by what miscarriage I know not, none of the Pharmacopœia's have yet agreed in the Composition. But this you may be certain is right: and by the way take notice, That the Tartar is added here also for the better penetration of the simples, to impart their virtue to the Water more effectually, and to stop the dissipation of their volatile parts.

The remarkable virtues of this Syrup, have caus'd some to give it the Name of *The Balm of the Liver and Spleen*, the obstructions whereof it powerfully op'ns, as also of the Pancreas and Mesenteric. It is recommended against the Jaundice and Cachexies, as also to soft'n and discuss the hardness and swelling of the Belly which happ'ns to little Children through obstructions caus'd by the Worms. It is successfully us'd in Apozems appointed to prepare bad humours for digestion, especially cholerick ones, and to open the passages necessary for their evacuation. It is purgative, compounded with Rhubarb, for which reason it is giv'n sometimes alone to little Children, sometimes mix'd with Purgative infusions, especially in Diarrhea's, Lienteries, Dysenteries, and other cholerick Distempers that harass the Intestines. And it has this good quality, that as it purges the ill-humours, it strength'ns all the lower parts of the Belly. The dose is from one ounce to two.

They that desire a simple Syrup of Succorie may prepare it with equal parts of fine Sugar and Juice of Succorie depurated by settlement, clarify'd together with the white of an Egg, and boyl'd to the consistence of a Syrup.

Syrupus

Syrupus Roborans.

℞. *Rhabarbari elect. incisi*, ʒ iij.
Baccarum Myrti contusarum,
Rosarum Rubrarum exungulararum, an. ʒ iij.
Tartari Alb. contusi, ʒ j.

A strength'ning Syrup.

℞. Choice Rhubarb cut, ʒ iij.
Mirtle-berries bruise'd,
Red-Roses cleans'd, an. ʒ iij.
White-Tartar bruise'd, ʒ j.

Slice the Rhubarb, bruise the Berries, beat the Tartar in a Mortar, and put them with the Roses cleans'd from their whites, into a Glaz'd-earth'n-pot with a narrow mouth, in six pints of Water wherein Steel has been quench'd. Cover the Pot, and set it over hot embers for 24 hours; then let them boil a little; which done, strain and press the Sediment strongly. Clarifie the Liquor with the white of an Egg and four pound of Sugar, and boil them up over a soft fire to the consistency of a Syrup.

Though the Purgative-vertue of Rhubarb may not seem necessary for the purposes of this Syrup, yet it had been ill-left out; in regard it may, as it were, insensibly evacuate some ill-humours, while it's more terrestrial parts assisted by other Medicaments, fortifie the parts that were weaken'd and relax'd. The purpose of the Tartar is the same as before.

This Syrup is highly esteem'd for the strength'ning and restoring the Stomach and Liver debilitated. It is very much us'd in the cure of Diarrheas, Lienteries, Dyenteries, and Hepatic-fluxes; it creates an Appetite, and helps Digestion. It is good to help the retentive Faculty of the Stomach, and in losses of Blood. You may take it fasting, alone, or mix'd with proper Liquors. The usual dose is an ounce, which you may enlarge to two.

Syrupus Myrtinus.

℞. *Baccarum Myrti*,
Mespilorum ad maturitatem vergentium, &
Radicis Symphiti majoris, an. ʒ iij.
Sumali Citrini,
Fructuum Oxyacantha recentium,
Granorum Sumach,
Balaustiorum,
Rosarum rubrarum mundatar. an. ʒ ij.

Syrup of Myrtle.

℞. Myrtle-Berries,
Medlars near ripe, and
Root of Greater Cumfrey, an. ʒ iij.
Yellow-Saunders,
Fresh-Barberries,
Seeds of Sumach,
Double Flowers of wild-Pome-granates,
And
Red-Roses clean pick'd, an. ʒ ij.

Take the Myrtle-Berries dry, the Medlars when they are almost ripe, bruise them well, as also the Sumach-seeds, the Barberries, the Pome-granate flowers, the Yellow-Saunders, and the Roots of great Confrey, and putting them all together with the Roses clean-pickt into an Earth'n-glaz'd-pot; pour upon them three pints of fair Water, and of the Juice of Quinces and wild-Pears, of each two pints. Thrust down the Ingredients into the Liquors, cover the Pot and set it four and twenty hours upon hot embers, at the end whereof boyl the Infusion a good quarter of an hour, and when it is half-cold, strain and squeeze it strongly out; and having clarify'd the Liquor with the white of an Egg with five pound of the finest Sugar, boyl them over a moderate fire to the consistence of a Syrup.

Syrup of Myrtles cools, dries and binds, for which reason it is successfully made use of to stay thin Defluxions upon the Lungs, and to stop the conghing which proceeds from thence. It is also very proper to stay Loosenesses, Spitting and vomiting of Blood, and all other internal *Haimorrhagias*. It stops the excessive flowings of the *menstruum's*, and all want of retention in the Stomach and Bowels. It is highly esteem'd for the cooling of Inflammations, and healing Ulcers of the Mouth, Tongue or Throat. It is tak'n alone from one ounce to two, or else in Distill'd-waters or proper Decoctions.

Syrupus Jujubinus.

℞. Jujubas,	Nº. lx.
<i>Hordei mundati,</i>	
<i>Glycyrrhiza,</i>	
<i>Capilli Veneris Montpel. an.</i>	℥j.
<i>Violarum recentium,</i>	M. j.
<i>Seminum Malva,</i>	
<i>Cylindrium,</i>	
<i>Papaveris albi,</i>	
<i>Melono,</i>	
<i>Lactuca, an.</i>	3 iij.

Syrup of Jujubs.

℞. Jujubs,	Nº. lx.
Barley pickt,	
Liquorice,	
Venus-Hair of Montpelier, an.	℥j.
Fresh-Violets,	M. j.
Seeds of Mallows,	
Quinces,	
White-Poppie,	
Of Melon,	
Of Lettice, an.	3 iij.

Put the pickt Barley with six pints of Water into an Earth'n-glaz'd-pot, and let it boyl over a gentle fire for a good half hour; then put in the Jujubs slic'd, and let them boyl a good quarter of an hour; then add the Liquorice scrap'd and bruise'd, the Venus-Hair cut, and the Seeds bruise'd, and let them bubble a while. Then add the fresh-Violets, thrusting them down into the Decoction, at the same time taking off the Pot from the fire; and when the Decoction is somewhat cool, strain it, and having clarify'd the Liquor with the white of an Egg with three pound of fine Sugar, boyl it over a gentle fire to the consistence of a Syrup.

Should the Decoction of the Ingredients prescrib'd for the making of this Syrup be made without regard had to the viscosity of the Seeds, and without following exactly the order to be observ'd in the boyling, it would be so clammy that the Syrup could never keep long. Much less would it keep, and much more irregular would the consistence be, if as the Ancients did, you should add Gum-Tragacanth. For two drams of that Gum were enough to make it as thick as a Looch, and keep it from being transparent. But observing my method, the vertue which is requir'd in the Ingredients, will not fail to remain in the Syrup, and the consistence will be proper.

Syrup of Jujubs is chiefly made use of for Persons that are troubl'd with a dry cough, and are troubl'd with hot and thin Defluxions upon the *Astera Arteria* or Rough Arterie, or upon the Lungs; for it thick'ns thin slegm, and qualifies the acrimonie thereof, and helps to expectorate. It is tak'n from half an ounce to an ounce, alone, or else in Pectoral-Pisanes, Juleps, Apozems, or mix'd with Looches.

Syrupus Florum Tussilaginis
Simplex.

℞. <i>Florum Tussilaginis recentium,</i>	℔jss.
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Put the Flowers into an Earth'n-pot glaz'd within, having a streight mouth; and covering the Pot, set it upon hot cinders for twelve hours, at the end whereof give the Infusion some few bubling-boilings, strain it and press it out. Then putting the like quantity of fresh Colts-foot Flowers into the same Pot, pour upon them the strain'd Liquor. Cover the Pot and set it upon the hot embers, as long as before, then letting the Infusion boyl a little, strain it, squeeze it, and clarify the Liquor with the white of an Egg with four pound of fine Sugar, and let it boyl over a soft fire to the consistence of a Syrup.

The Syrup of Flowers of Colts-foot is highly extoll'd to cut and loos'n tough-slegm from the rough Artery and Lungs, for which reason it gives great ease to those that are Asthmatic, and such as cannot freely breathe. It is tak'n alone by intervals fasting, from two drams to half an ounce. It is also mix'd in Looches, and Pectoral Pisanes.

Syrupus de Tussilagine Compositus.

℞. <i>Radicum Tussilaginis,</i>	℔ss.
<i>Foliorum & florum ejusdem, an.</i>	M. iij.
<i>Capilli Veneris Montpel.</i>	M. ij.
<i>Glycyrrhiza.</i>	℥j.
<i>Aqua Fontana,</i>	℔ viij.

Compound Syrup of Colts-foot.

℞. Roots of Colts-foot,	℔ss.
Leaves and Flowers of the same, an.	M. iij.
Montpelier Venus-Hair,	M. ij.
Liquorice,	℥j.
Fountain-water,	℔ viij.
Gather	

Gather the Roots toward the end of Winter, the same Flowers and Leaves, when they are shot forth. Dry the Roots and Flowers, and keep them till the Leaves are ready. Then bruise the Roots well, and boil them for half an hour in eight pints of Fountain-water. Then adding the Leaves cut, let them boil a quarter of an hour with the Roots. Then put in the Liquorice scrap'd and bruis'd, the Venus-hair cut, and the Flowers. Give them a gentle boiling, and at the same time take off the Decoction from the fire. Strain it and press it when it is a little cool. And having clarify'd the Liquor with the white of an Egg with five pound of the finest Sugar, boil it to the consistency of a Syrup, a little thicker then ordinary, by reason of the viscosity of the Colts-foot.

The different substance of the Ingredients that compound this substance, require different spaces of boiling: so that we cannot either infuse or boil them all together at the same time, unless we should despoil the principal rules of Pharmacy, which teach us to begin our Decoctions and Infusions with the most solid Medicaments.

The same vertues may be attributed to this Syrup, as to the former; only we may believe that it acts with more force, by the Conjunction of the Roots and Leaves of Colts-foot, the Liquorice, and the Maiden-hair. But in lieu of that, it is somewhat more unpleasant. The Dose and use is much the same.

**Syrupus Antiasthmaticus,
D. D. D' AQUIN.**

**An Anti-Asthmatic Syrup of Monsieur
D' AQUIN.**

<i>R. Hordei Mundari,</i>	℥ ij	<i>R. Pickt Barley,</i>	℥ ij.
<i>Radicum Petasidis,</i>		<i>Roots of Butter-Bur,</i>	
<i>Enula Campana,</i>		<i>Elecampane,</i>	
<i>Apii</i>		<i>Parley,</i>	
<i>Feniculi</i>		<i>Fennel,</i>	
<i>Liquoricia, &</i>		<i>Liquorice, and</i>	
<i>Uvarum Damascenarum</i>		<i>The best and biggest sort of Rai-</i>	
		<i>sins of the Sun,</i>	
<i>Dactylos Eruclaeos</i>	N ^o . xij.	<i>Ston'd Dates,</i>	N ^o . xij.
<i>Jujubae,</i>		<i>Jujubs,</i>	
<i>Sebesten, ana.</i>	N ^o . xxx.	<i>Sebestens, an.</i>	N ^o . xxx.
<i>Foliorum Tussilaginis,</i>		<i>Leaves of Colts-foot,</i>	
<i>Pulmonaria,</i>		<i>Lungwort,</i>	
<i>Summitatum Hyssopi,</i>		<i>Tops of Hyssop,</i>	
<i>Prassii Albi,</i>		<i>White Hore-hound,</i>	
<i>Capill. ven. Monspel. an.</i>	Mj.	<i>Monspelier Maiden-hair, an.</i>	Mj.
<i>Seminum Anisi,</i>		<i>Seeds of Anise,</i>	
<i>Bombacis, an.</i>	℥ B.	<i>Cotton-Tree, an.</i>	℥ B.
<i>Florum Tussilaginis,</i>		<i>Flowers of Colts-foot,</i>	
<i>Pedilicati, an.</i>	M. B.	<i>Cats-foot, an.</i>	M. B.

Boyl the pickt Barley half an hour in nine pints of Water, then adding the Roots cleans'd and cut, boyl them half an hour longer: next put the Dates ston'd and cut, with the Jujubs, Sebestens, and Raisins ston'd, and having boyl'd them among the rest, for a quarter of an hour, put in the Herbs shred, and let them boyl another quarter; add then the Liquorice and Seeds bruis'd, the Maiden-hair and Flowers, and after some few bubblings, take the decoction from the fire. Strain it being somewhat cool'd. Then clarify the Liquor with the white of an Egg and five pound of fine Sugar, and boyl it over a gentle fire to the consistence of a Syrup.

This Syrup is very proper to cut and loosen cold, viscons and tough slegm, from all the parts serving to respiration. It principally helps those that are Asthmatick, and those that are troubled with inveterate Coughs, for it opens the passages and removes the slegm that stops them. It may be call'd the Balsom of the Breast, and particularly for old Men. Take a spoonfull at a time every foot by night or day, so that you may be said to be fasting, and continue it as occasion requires.

Syrupus

Syrupus Resumptivus, sive de Testudinibus.

The Resumptive Syrup, or Syrup of Tortoises.

R. *Cornis Testudinum Nemeratium*, lbj.
Cancrocorum fluvialium, 3 viij.
Hordei Mundati,
Carnis Daelylorum,
Passularum Damascenarum, an. 3 ij.
Jujubas,
Sebesten, an. N^o. xij.
Glycyrrhiza rasa & contuse, 3 j.
Nucleorum Pineorum,
Pistaciarum Mandatarum,
Seminis Bombacis,
Melonis,
Cucumeris,
Citrulli,
Florum Nymphae, & Violarum, an. 3 ss.
Seminum Lactuca,
Papaveris Albi, an. 3 ij.

R. Of the flesh of Wood-Tortoises, lbj.
 River-Crabs, 3 viij.
 Pickt Barley,
 Pulp of Dates, and the
 Fairest largest Raisins of the Sun, an. 3 ij.
 Jujubs,
 Sebesten, an. N^o. xij.
 Liquorice scrap'd and bruis'd, 3 j.
 Pine-Kernels,
 Pistaches cleans'd,
 Seed of the Cotton-Tree,
 Melon,
 Cucumber,
 Citrulls,
 Flowers of Water-Lilly, and
 Violets, an. 3 ss.
 Seeds of Lettice,
 White-Poppy, an. 3 ij.

Take the flesh of Wood-Tortoises, parted from the Bones, the Skin, and the Entrails, and the River-Crabs; put them into a glaz'd Earth'n-Pot, with two ounces of pickt Barley. Pour upon them six pints of Fountain-water, and having cover'd the Pot, boil the whole over a gentle fire for two hours. Then add the Fruits cleans'd and cut, and boil them with the rest for a quarter of an hour. After which, put in the Pine-kernels, the Pistache's, and the Seeds bruis'd, next to them the Liquorice and the flowers of *Nymphae*, and lastly, the Violets; and having given them some few Bublins, take the Pot from the fire, and when the Decoction is somewhat cool, strain and clarify it with the white of an Egg and three pound of Sugar. Then boil it to the consistency of a Syrup. And when it is cold aromatize it with six drops of Oyl of Aniseed, incorporated with an ounce of fine powder'd Sugar.

This Syrup is not so much in use; whether it is for the difficulty of getting Wood-Tortoises, or for the aversion that several sick people have to those sort of Animals; or else for that it will not keep long: as being only to be prepar'd upon occasion and for particular Patients.

However, the vertues of it are very considerable to restore strength to Persons wast-ed, and extenuated by long sickness: It helps the Pitsical, and those that labour under a *Marasmus*, for it moist'ns, and cools, and extinguishes preter-natural heat. It is to be taken between Meals in a Spoon, from half an ounce to an ounce, continuing the use of it for a good while and often. It may be also mix'd in Juleps or Emulsions.

Syrupus Nymphae.

Syrup of water-Lillies.

R. *Florum mediorum Albissimum Nymphae*, lbj.

R. The middle whitest flowers of Water-Lillies, lbj.

Take only the white part of the Flowers of *Nymphae*, and weigh out two pound; and having put them into an Earth'n-pot glaz'd within, with a narrow mouth, pour upon them nine pints of boiling Water; thrust the Flowers down into the Water, and having cover'd the pot, set it upon hot embers for twenty four hours: then letting the infusion bubble a while, strain it out, and pour it hot upon the same quantity of fresh Flowers of *Nymphae*, put into the same pot, and having cover'd it, repeat the same infusion, boyling and straining; then clarify the Liquor with the white of an Egg, and four pound of Sugar, and boil it to the consistence of a Syrup, adding at the latter end of the boyling four ounces of clarify'd Juice of Granates. This Syrup may be a little better boyld then ordinary to prevent the viscosity of the infusion from spoiling the Syrup.

Syrup

Syrup of Water-Lillies cools and moistens very much, for which reason the use of it is very proper, as well in continu'd as intermitting Fevers. It qualifies the boiling of the choler, and appeases the pains that proceed from thence, particularly those of the Head. It quenches thirst and allays Venereal desire. It provokes a soft sleep, and is good against the heat of the Reins, and Genitals. It thick'ns the humours, and takes away their acrimony. It may be tak'n alone from half an ounce, to an ounce and a half. But usually it is mix'd with distill'd waters, Emulsions, or in Decoctions, like a Julep.

Syrupus Papaveris Albi.

R. Caputum Papaveris Albi ad maturitatem vergentium, sed adhuc virulentum incisum, lb iij.
Capitum papaveris Nigri ejusdem maturitatis. lb ij.

Syrup of white-Poppies.

R. Of the heads of White-Poppies inclining to ripeness, but yet green, and cut, lb iij.
Heads of Black-Poppies of the same ripeness, lb ij.

Gather the heads of both the Poppies before they be ripe. Throw away the tail, and the small Crown upon the top of every head. Cut them, and put them into an Earth'n-pot glaz'd within, and pour upon them fifteen pints of boiling water, cover the pot, and set it upon the hot Embers for four and twenty hours, then having boyl'd them a quarter of an hour, strain and press them out; Clarifie the Liquor with the white of an Egg, and six pound of fine Sugar, and boil it to the consistence of a Syrup.

The use of Syrup of white-Poppy is very frequent, being very proper to ease pains and stay defluxions, which interrupt sleep. It takes away the acrimony of the humours; and by insensible transpiration expels thin, sharp, and corroding humours. It mortifies acids, stops the violence of Coughing, allays the motion of Flegm, and gives great help to those that spit blood. The Dose is from half an ounce to an ounce in proper Liquors.

This Syrup is to be in every thing preferr'd before the *Diacodium* of the Ancients.

Syrupus Papaveris Rhæados.

R. Florum Papaveris Rhæados recentium, lb j.

Syrup of wild-Poppy, or Corn-Rose.

R. Flowers of wild-Poppy, new-gather'd, lb j.

Put them into a glaz'd Earth'n-pot, and pour upon them four pints of boiling fountain-water, cover the pot and set it for 6 hours over hot embers; then having caus'd them to boyl a little while, strain and press them, and pour the liquor upon the same quantity of Poppy-Flowers put into the same Vessel; let them macerate and boyl as before; then strain and press them again, and having clarify'd the Liquor with the white of an Egg, with four pound of Sugar, boyl it up to a Syrup somewhat thicker then ordinary, by reason of the excess of superfluous moisture in the Flowers of red-Poppy.

The Syrup of the Flowers of red-Poppy, is commended in Diseases of the Brest, more especially in Pleurifies, chiefly where sharp, acrimonious, and thin humours are to be stand and carry'd off. It hinders the coagulation of the blood, it assists expectoration, expels choler by transpiration, and causes sleep. The Dose is from half an ounce to an ounce, or an ounce and a half at most, either alone, or in distill'd-Waters, Decoctions, or mix'd with other Syrups.

Syrupus de Rosis siccis.

R. Rosarum Rubrarum exanguinarum siccarum, lb j.

Syrup of dry Roses.

R. Red Rose-buds pick'd and cleans'd from their white bottoms and dry'd, lb j.

Put them into a glaz'd Earth'n-pot, and pour upon them six pints of boiling fountain-water, cover the pot, and keep it upon the hot ashes one or two hours, and having

giv'n the infusion two or three bublins, strain and press it forth. Clarifie the Liquor with the white of an Egg, and four pound of fine Sugar, and boyl it to the consistency of a Syrup, adding toward the end one dram of Spirit of Sulphur or Vitriol.

Syrup of dry-Roses fortifies the Stomach, Liver, Spleen, and Bowels. It stays Vomiting, and all want of retention upwards or downwards. It is also very proper to stay defluxions that fall upon the Brest, to cleanse and heal little Ulcers in the Mouth and Throat, and to stop internal Bleedings. The Dose is from half an ounce to an ounce, either alone, or in Gargarisms, Juleps, or common drink.

Syrupus Florum Tunicae five Caryophyllorum hortensium.

R. Florum Caryophyllorum hortensium purpureorum mundatorum. ℥iij.

Syrup of Clove-gillow-flowers.

R. Clove-gillow-flowers pick'd and cleans'd, ℥iij.

Take only the red part of the body of the Clove-gillow-flower, cutting off the white bottom with a pair of Scissors; Weigh out three pound of the Flowers thus cleans'd, and having put them into a Vessel of Earth glaz'd within, with a streight mouth, pour upon them nine pints of boyling Fountain-water. Thrust down the Flowers with a Woodd'n Spatula; cover the Pot and set it upon the hot embers for six hours, at the end whereof let the infusion boyl a little, then strain and press the Flowers, and pour the hot Liquor upon the same quantity of fresh Flowers, put into the same Vessel. Macerate, boil, strain, and press them as before. Then clarifie the Liquor with the white of an Egg, with six pound of fine Sugar, and boyl it in the same Vessel over a gentle fire to the consistence of a Syrup.

Syrup of Gillow-flowers is as odoriferous as pleasing to the taste. It is very good to strength'n the Heart, Brain, and all the noble parts. For which reason it is highly commended against the Palpitations and Faintings of the Heart, weakneses of the Stomach, Pestilential Air, Malignant Fevers, and Epidemic Diseases; as also to quick'n the Spirits, and strength'n the Memory. It may be tak'n in several Liquors, or in your usual Drink, or mix'd with Opiates, and several other Medicines. The Dose is from half an ounce to an ounce.

Syrupus Melissophylli Compositus.

R. Radicum Scorzonerae,

Dittamni Albi,

Buglossi,

Pentaphylli, mundatorum, an. ℥iij.

Tartari Albi pulverizati, ℥iij.

Foliorum Melissa recentis, ℥iij.

Menthae,

Scabiosa,

Succisa, an. ℥iij.

Seminum Citri,

Ocymi,

Oxalidis, &

Cardui Benedicti, an. ℥iij.

Compound Syrup of Balm.

R. Roots of Vipers-grass,

White Dittany,

Buglossi,

Cinque-foil well-pickt, an. ℥iij.

White Tartar pulveriz'd, ℥iij.

Leaves of fresh Balm, ℥iij.

Mint,

Scabiosa,

Devil's bit, an. ℥iij.

Seeds of Citron,

Basil,

Sorrel, and

Carduus Benedictus, an. ℥iij.

Cleanse the Roots, and having bruin'd them in a Marble Mortar, put them together with the white-Tartar into a glaz'd Earth'n Vessel, in eight pints of Fountain-Water, and let them boyl gently for a good half hour; then add the herbs cut, and the seeds bruin'd, and let them boyl a good quarter of an hour with the Roots. After that, strain and press out the liquor, clarifie it with the white of an Egg, with half a pint of Juice of Balm, and four pound of fine Sugar, and boyl it to a Syrup. When it is cold aromatize it with four drops of distill'd Oyl of Balm, or with Oyls of Citron, and Orange-peels, and Gut. ij. incorporated with fine powder'd Sugar.

The several parts of Plants so judiciously elected that makes up the composition of this Syrup, evidently demonstrate its efficacy to strength'n the Heart, and to defend it, as well as the rest of the Noble Parts against Pestilential Air, and Diseases. It prevents

vents the putrefaction of the humours, keeps them from engendring. It cherishes the the Natural heat, creates an Appetite and helps Digestion. The dose is from half an ounce to an ounce, either alone or mixt with Potions, Opiates or other Medicines.

Syrupus de Stoechade correctus.

Rx. *Florum Stoechadis Arabica siccorum*,
 ζ iiij.
Summit. sicc. Betonica,
Salvia,
Thymi,
Calamintha, an.
 ζ j β .
Florum Calendula,
Rorismarini,
Lavendula, &
Lillii convallium, an.
 ζ j.
Seminum Ruta,
Paonia,
Danci Cretici, an.
 ζ β .
Tartari albi pulverati,
 ζ j.

Syrup of Cassidonie correct.

Rx. Drie Flowers of *Arabian-Cassidonie*,
 ζ iiij.
Drie tops of *Betonie*,
Sage,
Thyme,
Calamint, an.
 ζ j β .
Flowers of *Marigolds*,
Rosemary,
Lavender,
Lilly of the Vallies, an.
 ζ j.
Seeds of *Rue*,
Peonie,
Cretan Wild-carrot, an.
 ζ β .
White *Tartar pulveriz'd*,
 ζ j.

Cut the Herbs, bruise the Seeds, beat the Tartar in a mortar; and having mix'd them with the Flowers and put them into a glass-Cucurbit, pour upon them four Pints of good *Spanish-Wine*, and as much of the distill'd-water of flowers of the Tilet-tree. Fit an Alembic to the Cucurbit, and a small Recipient to the Beak of the Alembic, all well-luted. Let the Ingredients macerate cold for four and twenty hours. Then place the Cucurbit in a Sand-Bath, and with a moderate fire draw forth by Distillation 2 Pints of Sulphurie-Aromatic-Water, and put it up in a Vessel well-stopp'd. After that, let the Vessels cool, and having unluted the Alembic, strain and press out all that remains in the Cucurbit; and having clarify'd the Liquor with the white of an Egg with four pound of fine Sugar, boyl it over a gentle-fire to the consistence of a solid Electuary: and when it is almost cold, mix and incorporate with it the two Pints of reserv'd Aromatic-distill'd-water, together with distill'd Oyls of Rosemary, Lavender, Cinnamon and Cloves, of each two drops mix'd with an ounce and a half of fine-powder'd Sugar, and put it up in a Glass-bottle well-stopp'd.

The addition of some Cephalics, and of certain distill'd Oyls instead of some Aromatics, the leaving out the drie Raisins, and the new way of Preparing this, may perhaps surprize those who had rather err with the Ancients, then either to seek for, or follow a better method.

But certainly this Method must be approv'd by those who shall take the pains to compare this Preparation with those which are to be found in several Dispensatories.

For they shall find here no Ingredients but what are proper to second the intention for which they are prescrib'd, and whose vertues could not be better embody'd together then by this Preparation. I say they must acknowledg, That the most effectual vertues of the parts of Plants here prescrib'd, consisting of a volatile Sulphur, there was no better way to separate them then by Distillation, while that which is more fix'd, is incorporated in the liquor that remains at the bottom of the Cucurbit. So that by this Preparation all the pure parts of the Ingredients, as well fix'd as volatile, are united together, and embody'd in the Syrup.

Syrup of Cassidonie is very proper to fortifie the Brain, Stomach, and all the Noble parts. It is chiefly made use of in Apoplexies, Palsies, Epilepsies, and other cold Diseases of the Brain. It attenuates thick humours, cuts and loos'ns clammy and viscous flegm: op'ns obstructions, especially of the Brain: by little and little it consumes cold Rhumes; it heats and strength'ns the cold parts, and gives great ease to those that are troubl'd with the Asthma's. The dose is usually from half an ounce to an ounce, alone or mix'd with proper Liquors.

**Syrupus Lientericus D. D.
D'AQUIN.**

R. Summitat. Absinthii Majoris,
Rosarum Rubrarum Exungulatar. an. Mij.
Limatura Chalybis Nodulo inclusa,
Rhei Elect. &
Corticis Myrobalanorum Citrinorum, an. ʒij β
Tartari Alb. pulverati,
Santali rubri confusi,

**A Syrup against the Lientery, by Mon-
sieur D'AQUIN.**

R. The tops of the bigger Wormwood,
Red-roses pickt, an. M.ijj.
Filings of Steel ty'd up in a little
cloth, ʒij.
Chosen Rhubarb, and
Rind of yellow-Mirobalans, an. ʒij β.
White-Tartar pulveriz'd, ʒj.
Red Saunders bruiz'd, ʒβ.

Bruise the Wormwood, cut the Rhubarb, red-Saunders, and the bark of the Mirobalans, and loosely tie up the filings of steel. Then put the whole into an Earth'n-pot glaz'd within, with a streight mouth; and having pour'd upon them three pints of the Juice of Plantain, and as much of the Juice of Roses, cover the pot, and set it upon hot embers for four and twenty hours. After which, boyl the whole over a little fire, for a good quarter of an hour; then strain and press out the Liquor, clarify it with four pound of good Sugar, and boyl it to the consistency of a Syrup.

This Syrup is very powerful to stay Lienteries, for which purpose it is particularly prescrib'd. It strengthens the Stomach, Liver, Spleen, and all the Bowels. So that it is proper against all defects of the retentive faculty, either upward or downward, and against all Diseases that proceed from feebleness of the Bowels. It qualifies the acrimony of the humours, and stops internal Fluxes of Blood. The Dose is from half an ounce to an ounce and a half, alone or mix'd in proper Liquors, and may be taken several days together if occasion require.

**Syrupus Chalybeatus Aperiens Ca-
tharticus D. D. D'AQUIN.**

*R. Limatura Chalybis in Nodulo laxo & su-
spenso ligata, ʒij.*
Radicum Feniculi,
Cicberis, &
Rubia Tinctorum, an. ʒij.
Tartari Albi confusi,

**A Chalybeat opening purging Syrup of
Monsieur D'AQUIN.**

R. Filings of steel ty'd in a loose hanging
knot, ʒvj.
Roots of Fennel,
Succory, and
Dyers-Madder, an. ʒij.
White Tartar bruiz'd, ʒij.

Cleanse and bruise the Roots, beat the Tartar in a Mortar, and put them together into an Earth'n-pot glaz'd within, with a streight mouth, and let the steel hang down, ty'd in a linnen-cloth. Then pour upon them nine pints of boyling-water, wherein a good piece of red-hot steel had been quenched seven times at least, and covering the pot, set it upon the hot embers for twelve hours; which done, let them boyl for a whole hour.

Addetisque,

Then add,

Foliorum Ruta,
Rumicis,
Lupuli,
Agrimonia, &
Capill. Fern. Montpelienfis, an. Mij.

Leaves of Rue,
Pointed-docks,
Hops,
Agrimony, and
Maiden-hair of Montpellier, an. Mij.

Boil the whole again to the consumption of the third part, strain and press them and keep the straining.

Interim,

Interim,

*R. Foliorum Senna Orientalis mundato-
rum,* \mathfrak{z} vi.
Seminis Carthami contusi, \mathfrak{z} iij.
Tartari Vitriolati, \mathfrak{z} j.

In the meanwhile,

Take Leaves of Eastern Senna well-
pickt, \mathfrak{z} vj.
Seed of Spanish Saffron bruise'd, \mathfrak{z} iij.
Tartar Vitrioliz'd, \mathfrak{z} j.

Macerate them apart in another Vessel for twelve hours, in four pints of steel-water, pour'd boyling hot into the Vessel. Then give them a gentle boyling, and strain and press out the Liquor. Clarifie this Liquor with the white of an Egg, and half a pound of Sugar, and let this clarify'd Liquor by it self. Then clarifie the Liquor of the first Decoction with the white of an Egg, with six pound of fine Sugar, and boyl it to the consistence of a solid Electuary. At which time, add the purgative infusion clarify'd and boil it to a good consistency of a Syrup. Which being cool may be aromatiz'd with six drops of Oyl of Cinamon, incorporated with an ounce of fine Sugar.

They that will be careful to prepare this Syrup, and make trial of its virtues, will acknowledge that it was not without reason, that his Majesty's first Physician commanded me to insert the Receipt into this *Pharmacopoea*.

This Syrup is very proper to open Obstructions of the Spleen, Liver, Mesentery, and Pancreas, as also those of the Matrix, and to loosen and carry off the viscous and tartarous matters, that caus'd the Obstructions. It is made use of with success to cure Cachexies, Dropsies, retentions of the *Menstruums*, and the Jaundies. The Dose is from half an ounce to two ounces, giv'n alone, or mix'd with proper Liquors.

Syrupus Anti-Scorbuticus, D.D.
D'AQUIN.

R. Radicum Filicis Maris,
Angelica,
Eringii,
Raphani Rusticani, an. \mathfrak{z} iij.
Corticum Citri,
Aurantiorum, an. \mathfrak{z} ij.
Foliorum Melissa,
Fumaria,
Scolopendrii,
Coclearia,
Becabunga,
Nasturtii Aquatici,
Nummularia,
Menta, an. \mathcal{M} iij.
Seminum Nasturtii hortenf.
Cardui Benedicti,
Citri, an. \mathfrak{z} j.
Florum Tunica &
Genista, an. \mathcal{M} j.
Tartari Alb. contusi, \mathfrak{z} ij.

An Anti-Scorbutic Syrup of Monsieur
D'AQUIN.

R. Roots of Male-fern,
Angelica,
Eringo's,
Horle-radish, an. \mathfrak{z} iij.
Peels of Citron,
Oranges, an. \mathfrak{z} ij.
Leaves of Balm,
Fumitory,
Spleenwort,
Scurvy-grass,
Brook-lime,
Water-crelles,
Money-wort,
Mint, an. \mathcal{M} iij.
Seeds of Gard'n-Cresses,
Carduus Benedictus,
Citron, an. \mathfrak{z} j.
Clove-gillow-flowers,
Broom-flowers, an. \mathcal{M} j.
White-Tartar beaten, \mathfrak{z} ij.

Bruise the Roots, and boyl them over a soft fire, with the Tartar powder'd, in nine pints of steel'd-water. Add then the Herbs cut, and the Seeds bruise'd, and let them boyl all together for half an hour, then put in the flowers, and having thrust them down into the Decoction, take it off from the Fire, and strain and press out the Ingredients when they are half-cold. Clarifie the Liquor with the white of an Egg, and six pound of fine Sugar, and boyl it up to the consistence of a Syrup. When it is quite cold, aromatize it with three drops of Oyl of Cinamon, and as much Oyl of Cloves incorporated with an ounce of fine-powder'd Sugar.

The little skill which the Ancients had in Scorbutic Diseases, is the reason that specific Remedies for those Diseases are so rare in Dispensatories, and that several Physicians find them so difficult to cure. For which reason his Majesty's chief Physician thought fit to communicate to the World this Receipt, the Ingredients whereof being as exactly chosen

chos'n as dos'd, cannot but produce good effects, as well for the ease as for the cure of these Distempers; which are very frequent in the Northern Countries, especially in Sea-Towns.

This Syrup effectually purifies the Mass of the Blood, quick'ns its circulation, encreases the spirits that enliv'n it, to the want or numbness whereof, we have good reason to attribute all the symptoms that accompany Scorbutic Diseases. And because these Distempers are a long time a-growing, and for that the whole Mass of the Blood is infected, it will not be amiss to continue the use of this Syrup, not only to get the upper hand of the Distemper, but to prevent its return. You may take one or two spoonfuls at a time, Evening and Morning, and also between Meals.

Syrupus Violatus Violaceus.

Syrup of Violets Violetted.

℞. *Florum Violarum recentium emundatiorum,*

℥iij.

Take four pound of Violets deep-colour'd, newly gather'd and very clean.

Put them without bruising into a fine tin-vessel large and deep enough, with a fit cover, and pour upon them three pints of boyling Fountain-water, ^{* Which make eight pints Phyc measure.} ^{* Paris-measure;} let the flowers soak well in the water, and having cover'd the Vessel, set it six hours in a warm *Balneum Maria*, and then strain and squeeze the Infusion strongly, and pour it hot upon four pint of fresh Violets, put in clean into the same Vessel, cover'd and kept as long in *Balneo Maria* as before. Strain and squeeze the infusion, and you shall have a tincture altogether Violetted, charg'd equally both with the colour, smell, taste, and virtues of the Violets. Put this tincture into a Bason of fine Tin, large and deep, and set the Bason over a moderate fire, with double the weight of fine Sugar in powder, stir the whole with a Woodd'n-spatula, till all the Sugar be dissolv'd, and continue the Bason upon the fire, till the Syrup has only boyl'd two or three simpers. Take the Bason off the fire, and when the Syrup is quite cold, scum it, and put it up.

For the better keeping of it, cover the top of it, with fine-powder Sugar, which with the superficial moisture of the Syrup will make a kind of a crust that will preserve the Syrup two years together, provided the Pots were dry when the Syrup was put up, and that they be well-cover'd.

I confess that Syrup of Violets violetted, is so common in Shops; and so frequently made by the Ladies, that it might seem superfluous to insert it here; but not having met with any true Preparation yet, I thought fit to set down this Preparation, which experience will make you confess to be the better, and much superior to any other.

Some there are that add a spoonful or two of Juice of Citron, that the Violet colour of the Syrup may look a little more red. But beside, that those acids will hinder the Syrup from keeping long, that addition is altogether needless, in regard the colour of the Syrup will be better without it, and those acids may alter the quality of the Violets.

Syrup of Violets thickens thin humours that fall from the Brain upon the Lungs, and corrects their acrimony. It cools the heat of the Liver and Stomach, as also of most Fevers, particularly cholerick, adding some drops of spirit of Sulphur or Vitriol, or some other acid, and mingling it with Fountain, or River-water, or with some other proper Liquor. The pleasant taste of it makes it as much in use among those who are in health as among the sick; it is taken alone from half an ounce to an ounce, or else mingl'd in Juleps, Apozems, Emulsions, Looches, and many other remedies.

Formerly they made a laxative Syrup of Violets; compos'd of several infusions of whole Violets; but the Syrup prov'd very unpleasing, ineffectual, and more fit for Clysters then to be swallow'd, and therefore not fit for this place.

Syrupus de Pomis simplex.

Simple Syrup of Pippins.

℞. *Succi Pomorum redolemium depu-*

℥ij.

Sacchari Albissimi,

℥iij.

℞. The Juice of fragrant Apples clarify'd,

℥ij.

The whitest Sugar,

℥iij.

Having

Having press'd out the Juice from the Apples, set it in the Sun to clarify, then pour it out by inclination and filter it. That done, put the Juice and the Sugar together over a small fire, and there incorporate them to the consistence of a Syrup.

The Syrup may serve as an Example for several simple Syrups whose foundation is the Juice of any Fruit, such as are Cherries, Barberries, Red-Currans, Respits, Granates, Verjuice, &c.

You may also make the Syrup of Apples without fire, if when you have par'd the Apples you cut them into thin slices, throwing away the cores, and lay the thin slices in a new Hair-sieve, set in a silver or white-earth'n-bason, covering the Pippins with their thickness in Sugar, and continuing these layers of Pippins and Sugar till the Sieve be full. For then covering the sieve with another Plate or Bason, and leaving the whole two or three days in a cool place, you shall find in the lower Bason a very pleasant Syrup, well-colour'd and of a good consistency. This Syrup thus made without fire undergoes no alteration, being endu'd with all the good qualities that can be expected.

Syrup of Pippins is accounted a very high Cordial, and very proper against Palpitations of the heart, especially when they proceed from melancholic vapours rising from the Spleen. It is also very proper to comfort all the Noble Parts, quench thirst, and qualifie the heat of Cholerick-Fevers. It is to be tak'n by respits of time, either alone or mix'd with Decoctions or other proper Liquors.

Syrupus de Pomis Compositus.

R. Succi Pomorum redolentium, ℥ iij.
 Borraginis, &
 Buglossi depuratorum, an. ℥ ij.
 Folliculorum Senna Orientalis incisorum, ʒ iij.
 Tartari albi Montpelienfis cantusi, ʒ ij.

Syrup of Pippins compound.

R. Juice of fragrant Pippins, ℥ iij.
 Of Borrage, and
 Bugloss clarify'd, an. ℥ ij.
 Seed-bags of Senna of the East cut, ʒ iij.
 White Montpellier-Tartar bruise'd, ʒ ij.

Bruise the Pippins in a Marble-mortar with a Wood'n-Pestle, squeeze out the Juice, and having expos'd it for some days to the Sun, filter it; cut the Senna-Seed-bags, and put them into a Glaz'd-earth'n-pot with two ounces of Tartar pulveriz'd; pour upon them the purify'd Juices: cover the Pot, and set it upon the warm embers for 24 hours: then letting the Infusion simmer a while, strain and press it out, and having clarify'd the Liquor with four pound of very white Sugar, boyl it up to a Syrup. When it is perfectly boyl'd and quite cold, mixe with it the Tincture of two drams of Saffron in powder, extracted with three ounces of Distill'd-oyl of Balm.

I have said already, that for the more easie extracting the Juices of viscos Plants, you must put them whole into some Vessel, and having set them for some time over a moderate fire, pour out the Liquor at several times by inclination; which method must be us'd for extracting the Juices of Borrage and Bugloss here mention'd; and the Juice will be clear enough: though if you would have it clearer you may expose it to the Sun, and filter it.

The Ancients ty'd Saffron in a little Linnen-bag, and soak'd it in the Syrup during the Decoction, pressing it out from time to time, and leaving it in the Syrup when it was put up in the Pot, not considering that the long boyling of the Saffron, though ty'd in a Bag, could not be done without a manifest dissipation of the most volatile parts; that by those reiterated expressions a good part of the terrestrial and unprofitable part of the Saffron pass'd through the cloth, mix'd with the Syrup, and made it muddy; and that at length being left among the Syrup in the Pot, not being able to impart that vertue to it which it had lost, it occasion'd its putrefaction. Whereas the Tincture communicating the most essential parts of the Saffron to the Syrup, contributes to its preservation and beauty.

Some there are that propose the Extract of Saffron, which is better then the Knot. But because the Tincture is the base of the Extract, and for that the Tincture cannot be reduc'd into an Extract without some dissipation of the subtle parts of the Saffron, there is more reason to make use of the Tincture.

The principal qualities of the compound Syrup of Pippins, are gently to purge cholerick and melancholy humours: for which reason it is made use of in Distempers caus'd by those humours, particularly in Madnes and Hypochondriac passions. It is good

good also in Quartan-Agues, and to purge sharp and scalding humours that cause the Scurf and Itch, and most Diseases of the Skin. It may be tak'n alone from one ounce to two or three. But more frequently dissolv'd in Liquors, as the Decoctions of Apozemes, Tinctures, and Laxative Infusions.

Syrupus Florum Perficorum.

Syrup of Flowers of Peaches.

Rx. *Florum Perficorum recentium quantum libuerit.*

Rx. Of the Flowers of Peaches as much as you please.

Bruise them in a Marble-mortar with a Woodd'n-pestle, and squeeze out the Juice in a Press, and having purify'd it by standing, and clarify'd it with the white of an Egg and an equal weight of Sugar, boyl it over a gentle fire to the consistency of a Syrup.

The Preparation of this Syrup is not only easie, but keeps within it all the most considerable qualities and vertues of the Flowers; which is chiefly in their Juice.

For more exactness you may dry the Sediment, burn and reduce it to ashes, and by Lixivation, Filtration, Evaporation and ChrySTALLIZATION extract the Fix'd-salt that remains behind, and mixe it with the Syrup when it is boyl'd.

This Syrup is principally commended to purge the serosities that trouble the Brain, Nerves and Muscles, and which not only cause Rheumatisms, but the Apoplexie, Palsie, Convulsions, and other Diseases of the Brain. It also purges cholerick humours, op'ns obstructions, cuts the thick matters in the Mesenterie, Pancreas, Liver and Spleen. It is very proper also to kill Worms, and resist the putrefaction of the humours. The dose and administration is much the same with those of Compound Syrup of Pippins.

Syrupus Rosatus Solutivus.

Syrup of Roses Solutive.

Rx. *Succi defecatissimi Rosarum pallidarum, Sacchari albiissimi pulverati, an lb viij.*

Rx. Of the purest Juice of pale Roses, The finest powder Sugar, an. lb viij.

Gather your Roses newly blown betimes in the morning, bruise them in a large Marble-mortar with a Woodd'n-pestle, and having press'd out the Juice, fill it into Bottles; stop them and expose them to the Sun for some days: and when the grosser part of the Juice is fall'n to the bottom of the Bottles, pour the Juice into a wooll'n-Bag to strain it. Then weigh our eight Pints of this clear Juice, and put it into a Glass-Cucurbit, with the same weight of fine-powder'd Sugar. And having fitted a head to the Cucurbit, and fix'd a Recipient to the beak of the Alembic, distill out about three pints of good strong Rose-water. Then let the Bath cool, and having unluted the Alembic, you shall find in the Cucurbit a fair Syrup of Roses, fragrant, pleasing and full of vertue. Pour it out by Inclination into a Pot, leaving at the bottom of the Cucurbit that little feces which remains.

Though that the Purgative-quality of the Roses consists chiefly in their fix'd-salt, and some small portion of their less volatile Sulphur, which a moderate boyling cannot much diminish; nevertheless it is convenient to preserve and save as much of all the good parts of the Medicament, as much as may be. And therefore you need not wonder that you meet not here with that lofty, long and troublesome way of the Ancients, who in the composition of this Syrup repeat infusion to the ninth time. Not considering that by that great and unprofitable cost, the Roses lose their most Spiritous and fragrant part, and that a great part of the infusion is wasted in the Strainers, Vessels, and other Instruments us'd in the preparation; and that in the end they will have a Syrup less pleasant, but not so efficacious, as this which is here prescrib'd; the preparation whereof seems to me to be most fit to be observ'd, since that together with saving a good part of the Rose-water, you have a Syrup, wherein are all the qualities of the Roses that can be desir'd.

Syrup of Roses solutive purges very gently all the serosities contain'd in the Bowels, or dispers'd into several parts of the body. It is very useful in Epidemic Distempers. Yet there are several Women and Virgins that cannot abide the use of it. The Dose is much the same with that of the compound Syrup of Pippins, or Peach-flowers.

Syrupus

Syrupus Rosatus Compositus cum
Senna & Agarico.

Compound Syrup of Roses with Senna
and Agaric.

R. Foliorum Sennæ Orientalis mundatorum, ʒ iij.
Agarici electi incisi, ʒ ij.
Tartari Albi contusi, ʒ j.
Succi Rosarum Pallidarum depurati, lbvj.

R. Leaves of Oriental Senna cleans'd, ʒ iij.
The best Agaric cut, ʒ ij.
White-Tartar powder'd, ʒ j.
Juice of Pale-Roses clarify'd, lbvj.

Put the Senna, Agaric, and Tartar into an Earth'n-glaz'd-pot. Pour upon them six Pints of the Juice of Pale-Roses clarify'd, and having thrust the Ingredients down into the Juice, cover the Pot and set it 24 hours upon hot embers; then letting the infusion boyl a-while, strain it and press it forth: and having clarify'd the Liquor with the white of an Egg and four pounds of fine Sugar, boyl it over a gentle-fire to the consistence of a Syrup. When it is quite cold, aromatize it with six drops of Distill'd-oyl of Anise, and two drops of Oyl of Cloves, incorporated with an ounce and a half of fine powder'd Sugar.

This Syrup purges much more then ordinary Syrup of Roses; It purges Choler, Flegm and Melancholy. It kills and expels Worms. It op'ns the Passages; it cuts, attenuates, and loos'ns tough and viscous humours; and draws flegm from the remote parts. The dose is from one ounce to two. It is to be administr'd like other Purgative Syrups.

According to this method you may prepare a Compound Syrup of Roses with Senna and Rhubarb without Agaric, not so proper to purge flegm, and draw it from the remote parts, but to purge gently cholerick humours and strength'n the parts. But in regard this Syrup is not much in use, you may supply its defect by adding to Syrup of Roses solutive an Infusion of Senna and Rhubarb, when occasion requires. The proportion of Senna and Rhubarb must be equal to that of the Senna and Agaric prescrib'd above.

Syrupus Emeticus.

An Emetic Syrup.

R. Vitri Antimonii absq; additione parati, &
Nitro correcti, ʒ iij.
Succi Cydoniorum purissimi, lbvj.

R. Glass of Antimony prepar'd without
addition, and corrected with Nitre, ʒ iij.
Of the purest Juice of Quinces, lbvj.

Powder the Glass of Antimony very small. Put it into a Glass-Cucurbit; and hav- in pour'd upon it six Pints of Juice of Quinces very well clarify'd, cover the Cucurbit, and let them macerate for 24 hours in a Bath of ashes moderately hot; filter the liquor through a sheet of brown Paper, and return it into the same Cucurbit, with two pound of fine Sugar; then boil it in the Ember-bath hotter then ordinary, to the consistence of Syrup. When it is quite cold, aromatize it with two drops of Oyl of Cinamon incorporated with half an ounce of fine-powder'd Sugar, and keep the Syrup in a Bottle close-stopp'd.

Though the Antimony be the foundation of this Syrup, and that Vitrification and Correction be Chymical Operations, and beyond the verge of Galenic Pharmacy; nevertheless it is here very properly made use of, and this Emetic Syrup with as much reason here inserted. Nor is it to be wonder'd that six Pints of the Juice of Quinces should be prescrib'd to extract the vertue of three ounces of prepar'd Antimony, or that the Proportions of Liquors us'd in Infusions or Decoctions according to the Rules of ordinary Pharmacy are not here observ'd: For the Antimony thus prepar'd being in a condition to act in a very small dose, is as able sufficiently to impart its vertue to a good quantity of Liquor, which Liquor being afterwards united with the Sugar, and thus concentr'd by boyling, renders the Emetic Syrup no less pleasing, then powerful to operate in a much less dose then Emetic Wine, or any other Liquors, wherein usually several Preparations of Antimony are infus'd, but not concentr'd.

This Syrup is call'd Emetic, because of its effects, which are chiefly to excite vomiting, to empty the Stomach of ill-humours which are sometimes too obstinately fix'd. And it is observable that Syrup after it has provok'd vomiting, many times procures some stools, proceeding either from the Excrements of the Stomach or Bowels. It happ'ns also sometimes that some Persons never vomit, but that this Syrup works altogether

gether downward, which is so much the less trouble. There is no Preparation of Antimony that works with more gentleness or less trouble than this Syrup: It may be giv'n to all Ages and Sexes, sucking Children and old Men, in distempers caus'd by plenitude, particularly when there is a collection of bad humours in the Stomach. The dose is from two drams to an ounce, or at most to an ounce and a half for very strong Bodies. It is giv'n alone, or mix'd in white Wine, Broth, or any other proper Liquor. It is also mix'd with Purgatives diminishing the dose, and proportionating it to that of other Remedies.

Syrupus de Rhamno Cathartico.

Syrup of Purging-Thorn.

R. Baccarum Fruticis illius qui nomen fert Spina Cervina, aut Insectoria, seu Rhamni Cathartici, quantum libuerit.

R. Of the Berries of the Shrub call'd Hart's-Thorn, Stayning-thorn, or Purging-Thorn, as much as you think fit.

Put them to macerate into a Glaz'd-earth'n-vessel over hot embers for two or three hours, stirring them every-foot with a woodd'n-pestle. Then, having press'd them out, take six Pints of their pure Juice, and four pound of Sugar, and boyl them together over a soft fire to the consistency of a Syrup. Take it off the fire, scum it and let it cool, and aromatize it with four drops of distill'd-Oyl of Cinamon, and as much Cloves incorporated with an ounce and a half of fine Sugar in powder, and put up the Syrup well-stopp'd.

The Purging-Thorn is a low shrub, the trunk whereof is about as big as a Man's-leg; from whence grow several thornie-branches, with leaves like those of the Crab-tree. The Berries are as big as Juniper-berries well-grown; green at first, afterwards when they are ripe, black and shining. These Berries grow in clusters, having five or six Seeds within, long and triangular, the Juice whereof is somewhat dark greenish and bitter.

This Syrup powerfully carries off the serosities of all the habit of the Body. It is us'd in Cachexies, and in diseases of the Joynts, but particularly for the cure of watry Dropsies and Rheumatisms. The usual dose is from half an ounce to an ounce. It is tak'n alone or mix'd in Decoctions, or other proper Liquors.

I could here add several other Preparations of several other Syrups; but I am persuaded that the Preparations and Rules already set down will afford instruction sufficient to any *Apothecary* to prepare the rest which are here omitted.

CHAP. XVI.

Of Honeys:

I Thought fit to treat of Honeys immediately after Syrups, because that their Preparation and their consistency are not much unlike the one to the other. The extraordinary sweetness, the pleasing taste of Sugar, the plenty of it and its aptness to suck up foreign moisture, are the reasons that Honey is now-a-days less in request than formerly. For though that Honey may be said to be a collection and an extraction of the most pure parts of Flowers, Fruits, and other parts of Plants, and that the Dew and Influence of the Stars may very much contribute to its composition, and that there may be reason enough to prefer it before Sugar, which is the Juice of only one single Plant: nevertheless it is now-a-days less us'd than Sugar. So that we prepare for the Shops not above five or six sorts of Honeys, the most part whereof are appointed for Clysters: Two sorts of Oxyrels, and one Hydromel.

'Tis true that good Honey is oft'n made use of, and preserv'd likewise before Sugar in the Compositions of several Medicaments, and particularly of certain Opiats, which are to keep long, as Treacle and Mithridate; because the parts of Honey are more united and more viscous than those of Sugar, and because it is more fit to bind the Ingredients with which it is mix'd, and to resist putrefaction longer than Sugar.

Mel

Mel Rosatum.

Honey of Roses.

Rx. *Succi Rosarum Rubrarum,*
Mellis optimi, an. partes aequales.

Rx. Of the Juice of Red Roses,
 The best Honey, an. equal parts.

Bruise the Fresh red-Roses in a Marble-mortar, squeeze out the Juice and expose it to the Sun in Bottles for some days to purifie, then pass it through a Wooll'n-bag, and having mix'd it with equal parts of pure Honey, clarify both together with the white of an Egg: scum it when it is cold and put it up.

Red-Roses are of an earthy and compact substance, so that they will endure a longer and fiercer boyl'ing then other Roses, without endangering the dissipation of their good parts.

You may instead of the Juice make use of the Infusion of Red-Roses, two or three times repeated, and prepare it like the Infusion of the Flowers of Nymphaea for the Syrup. You may also use Honey of Roses laxative with the Juice of Pale Roses, observing the same method set down for Syrup of Roses solutive.

The Honey of Roses first mention'd, cleanses, closes and fortifies: therefore it is us'd for all diseases of the mouth, tak'n alone or in Gargarisms. It is also mix'd in Lotions and Vulnerarie Injections. It serves also in Opiates to cleanse and whit'n the Teeth; and is frequently us'd in astringent and cleansing Clysters. The proportion * *Near as big* of Honey of Roses in Lotions, Injections, Gargarisms or Clysters, is two *as our whole* or three ounces to a * *Chopine* of liquor, *Paris-measure.* *Pint.*

Mel Anthosatum.

Honey of Rosemary-flowers.

Rx. *Florum Recentium mundatorum,* ℥ ij.

Rx. New Flowers of Rosemary clean-pickt,
 ℥ ij.

Bruise the Flowers well-pickt and cleans'd in a Mortar with a woodd'n Pestle, and pass them through a Hair-sieve; then incorporate them with treble their weight of good Honey hot and scumm'd, without the addition of any other Liquor. When it is cold put it up.

The Flowers of Rosemary are of a Substance very thin and full of moisture, so that if they should be boyl'd in Water or in the Honey, their better part would be lost: and if the Honey should be charg'd with any extraneous moisture, by increasing the moisture of the Flowers, it would occasion putrefaction.

Anthosate-Honey thus prepar'd enjoys all the vertues of the Rosemary-flowers, and is of a due consistence, and may be as well swallow'd as dissolv'd in Clysters.

You may prepare a Honey with a Decoction of Rosemary-leaves, and use it in Clysters instead of Anthosate-Honey: But it is better to mixe the Leaves of Rosemary in the Decoction of Clysters, then to pester a Shop with a Honey so little us'd; besides, the apprehended danger which the heat of the pure Decoction of Rosemary-leaves may cause to the Bowels.

Honey of Rosemary-flowers prepar'd as above, may serve instead of conserve of *Anthos* or Rosemary-flowers prepar'd with Sugar. It may be swallow'd in all cold Diseases of the Brain: It strength'ns the memory, and disperses the Vapours that cause Vertigo's. It is also us'd in cold diseases of the Stomach and Intestines; particularly in windy Colicks and fits of the Mother, swallow'd or tak'n in Clysters.

Mel Mercuriale.

Honey of Herb-Mercury.

Rx. *Succi Mercurialis quiete defacati,*
 &
Mellis optimi, an. partes aequales.

Rx. Of the Juice of Mercury softly purify'd,
 and
 The best Honey, an. equal parts.

Clarifie

Clarifie them with the whites of Eggs according to Art, and boyl them to the consistence of a Syrup somewhat thicker then ordinary.

There are some that instead of drawing forth, and depurating the Juice of Mercury, only make a kind of Decoction; and they boyl the Honey as if they made use of the Juice, but they use a greater quantity of the Decoction.

Honey of Mercury mix'd with Clysters mollifies and soaks tough matters, that settle in the Bowels. It loosens the Belly, and provokes the *Menstruums*. It is very much us'd in Hysteric Distempers, and in all sorts of Colicks. The Dose is from one ounce to three, in proper Liquors or Decoctions.

Mel Violatum.

Honey of Violets.

℞. *Violetum recentium*,

℔ iiiij.

Take fresh Violets,

℔ iiiij.

Boyl them for a good hour in twelve pints of fair-water; strain the Decoction, squeezing the Violets. Then in the strain'd Liquor boyl four pound of new Violets, proceeding as before. Boyl yet four pound more of fresh Violets in the Liquor, and having strain'd and press'd the Decoction, and mix'd the Liquor with twelve pints of good Honey, clarifie it with the whites of Eggs; boyl it to the consistence of a Syrup somewhat thicker then ordinary, scum it, and put it up.

The volatile part of the Violets, which is subject to dissipation, is very useles in Honey of Violets, which is only for Clysters, whose principal vertue is to moisten, and render the Bowels slippery. The Dose and use of Honey of Violets, are the same with those of Honey of Mercury.

Mel Vulvaria.

Honey of stinking Arrache.

℞. *Foliorum Vulvaria*,

Fasc. ij.

Take of the Leaves of stinking Arrache, two little bundles,

Cut them and boyl them in sixteen pints of Fountain-water, to the consumption of the third part, and having strain'd and well press'd the boyl'd Herbs, boyl the same quantity of fresh Arrach in the Liquor, proceeding as before; then having mingl'd sixteen pints of the best Honey with the Liquor, clarifie it with two whites of Eggs, and boyl it to a just consistence. Scum the Honey and put it up.

Though Honey of Arrach be not so much in use, it deserves to be plac'd among the Honey's. For it is very effectual in Hysteric distempers; above all to appease the violent commotions of the *Matris*. It is also very useful in windy Colicks. The dose in Clysters is from two ounces to three.

Mel Nympharinum.

Honey of water-Lillies.

℞. *Florum Nymphae, rejectâ parte interiore*

℔ viij.

℞. Of the Flowers of Water-Lillies, leav-

ing out the yellow inside,

℔ viij.

Aqua Fontana,

℔ xvj.

Fair Water,

℔ xvj.

Boyl them over a gentle-fire to the consumption of the third part. Strain and press out the the Liquor: boyl the same quantity of fresh Flowers again in the Water. Strain and press out the Liquor, and having mix'd with it sixteen pints of the best Honey, clarifie it with whites of Eggs, and boyl it to a just consistency.

Honey of Water-Lillies is onely made use of in Clysters: It moist'ns, mollifies and cools the Bowels exceedingly. The dose is the same with that of Honey of Violets.

Oxymel Simplex.

Simple Oxymel.

℞. *Mellis optimi*,

℔ iiiij.

℞. Of the best Honey,

℔ iiiij.

Put

Put it into a glaz'd-Earth'n-pot, let it boil some few bubblings over a gentle charcoal-fire; when it is a little cool scum it.

Addetisque,

Then add,

Aceti Albi Optimi

℥ij.

Of the best White-wine Vinegar, ℥ij.

Boyl both together to the just consistency of a Syrup.

It is not necessary to boyl Water with the Honey, as some pretend to raise the scum, for it may be scumm'd without any addition. Nor is the Water e're a jot more necessary to qualifie the sharpness of the Vinegar, in regard that sharpness is not only the thing we desire, to maintain the effects expected from the *Oxymel*; but always remains last in the Decoction of the Vinegar. Besides, we must believe, that the Water which they would add, can be but a trouble, and that in the consumption which is to be made of it, it would but help forward the dissipation of some volatile part of the Honey.

This *Oxymel* is good to loosen tough and viscous flegm, as well in the Mouth and Throat, as in the Stomach and other parts of the body, where it may stick. It may be taken in a spoon a little at a time. But it is better in Liquors to make Gargarisms, adding more or less of the Liquors, as you desire the operation stronger or weaker; For the Liquors abate its activity. It is also mix'd with Looches and Syrups to abate its activity, and to assist them to cut and loosen flegm from the Lungs and Stomach. The Proportion of this *Oxymel* in Liquors, is from an ounce and a half to two ounces, in a pint of a deterfive decoction, or in some proper distill'd-water.

*Oxymel Scilliticum.**Oxymel of Squills.*℞. *Mellis Optimi,*
Aceti Scillitici,℥iiij.
℥ij.℞. Of the best Honey,
Vinegar of Squills,℥iiij.
℥ij.

Let them boyl gently, and scum them, then boyl them over a very gentle fire to a just consistence.

The Preparation of Vinegar of Squills is already set down in the Chapter of Vinegars.

You may guess at the vertues of the *Oxymel*, by what I have spoken concerning the qualities of the Vinegar.

*Hydromel Vinosum.**A Winy Hydromel.*℞. *Mellis Albi Optimi,*
Aqua pluvialis circa veris Aequinoctium
collecta,℥iiij.
℥xx.Take of the best white-Honey, ℥iiij.
Rain-Water sav'd at the time of the ver-
nal Aequinox, ℥xx.

Boil them gently together in a Copper-Vessel tinn'd within, stirring them from time to time, till the third part of the moisture be consum'd, or rather, till an Egg being cast into the *Hydromel* will not sink but swim at top. The *Hydromel* being thus boyl'd and settl'd, pour out all the clear Liquor into a small Cask, and put it in the Sun, or else in some hot place, for forty days, or else till the Fermentation be over. Fill up the waste of the Fermentation, or what the Cask wants of being full, with other *Hydromel*, or good Spanish-wine; and having stopp'd up the Vessel, set it in a Cellar, or some very cool place.

By this means, the *Hydromel* will have a taste like that of Malmsey, which having left its earthy parts and being exalted by Fermentation, will yield an inflammable spirit, like to that of Wine.

Sometimes we make compound drinks of Pectoral decoctions, sweeten'd with Honey, scum'd, clarify'd, and boyl'd to a thinner consistency then the preceding *Hydromel*, and which bear the name of *Hydromel*, because Water and Honey are their foundation; but these *Hydromels* are seldom prepar'd but for present use.

Winy *Hydromel* is a Medicinal nourishment, as pleasing as profitable. It comforts and strengthens the Noble Parts, and affords good nourishment, being made use of by the healthy as well as by the sick.

CHAP. XVII.

Of Looches.

Looches are Internal compositions, of a consistency between Syrups and soft Electuaries, and chiefly appointed for Diseases of the Lungs. The Greeks call them *Ἐκλύμαλα*, and the Latines *Linctus*, or *Lambatives*. The Name of Looch, though *Arabian*, has been always most in use. They are made thicker than Syrups, to the end that staying in the Throat, their virtue may have time to penetrate into the Brest, through the rough Artery, and to be imparted to the parts that want it, there to concoct and digest the flegm, and fit it for expectoration, to stop and thicken the Rheum when it is too thin, and to cut and attenuate flegm that is tough and obstinate. Nevertheless though they are much in use, they are seldom prepar'd, but when prescrib'd, in regard the Medicaments that compose them are ready at all times, and for that their mixture is not difficult. However, I will produce two Receipts, the composition whereof may be kept for some time, if you please, or be prepar'd upon occasion.

Looch Sanum Reformatum.

℞. <i>Hordei Mundati</i> ,	3j.
<i>Radicum Petasitidis</i> , &	
<i>Enula Campana</i> , an.	3℔.
<i>Passulas Damasceñas Mundatas</i> ,	
<i>Ficus recemes siccas</i> ,	
<i>Dactylos pingues Enucleatos</i> ,	
<i>Jujubas</i> ,	
<i>Sebesten</i> , ana.	Nº. xij.
<i>Foliorum Hyssopi</i> ,	
<i>Calamintha</i> ,	
<i>Capil. Ven. Montpelienfis</i> ,	
<i>Adianti Vulgaris</i> , an.	Mj.
<i>Seminum Malva</i>	
<i>Althæa</i> ,	
<i>Bombacis</i> , &	
<i>Papaveris albi</i> , an.	3ij.

A sound reformed Looch.

℞. <i>Pickt Barley</i> ,	3j.
<i>Roots of Butter-bur</i> ,	
<i>Elecampane</i> , an.	3℔.
<i>Large Ston'd Raisins</i> ,	
<i>New dry Figgs</i> ,	
<i>Fat Dates ston'd</i> ,	
<i>Jujubs</i> ,	
<i>Sebestens</i> , an.	Nº. xij.
<i>Leaves of Hyssop</i> ,	
<i>Calaminth</i> ,	
<i>Venus-hair of Montpellier</i> ,	
<i>Common Maiden-hair</i> , an.	Mj.
<i>Seeds of Mallows</i> ,	
<i>Marsh-mallows</i> ,	
<i>Cotton</i> , and	
<i>White-Poppy</i> , an.	3ij.

Boyl the pickt-Barley in a glaz'd-Earth'n-pot, over a soft fire, in six pints of Fountain-water, for half an hour; then add the Roots cleans'd and bruise'd, let them boyl with the Barley a good quarter of an hour; after that, put in the Fruits cleans'd and slic'd, which must boyl a little while with the rest; which done, put in the Hyssop, Calamint, and cold seeds bruise'd. After they have boyl'd a little while, take off the Decoction from the fire, and when it is half-cold, strain it and press it lightly; and having clarify'd it with the white of an Egg, with two pound of fine Sugar, boyl it to the consistency of a Syrup, a little thicker than ordinary. The Syrup being half cold,

Permiscantur,

<i>Pinearum</i> , &	
<i>Amygdalarum dulcium emundatarum</i>	
<i>contusarum & per cribrum trajecta-</i>	
<i>rum</i> , an.	3vi.
<i>Glycyrrhiza mundata</i> ,	
<i>Gummi Tragacanthi</i> , &	

Add thereto;

<i>Kernels of Pine-Apples</i> , and	
<i>Sweet Almonds cleans'd</i> , beaten to	
<i>powder</i> , and sifted, an.	3vj.
<i>Liquorice cleans'd</i> ,	
<i>Gum-Tragacanth</i> ,	

Arabici

*Arabici, &
Radici Ireos subtiliter pulveratorum,
an. ʒ iij.*

Arabic, and
Root of Orrice beaten into fine powder, an. ʒ iij.

Incorporate them with the Syrup, and when all the Ingredients are cold, aromatize it with Oyls of Annise, and Fennel, of each three drops, mix'd with an ounce of fine powder-Sugar; then put up the Looch in a Gally-pot well-stopp'd.

The pickt Barley being put into the Decoction, is the reason why fine-Sugar is prescribed instead of Pennets, usually prescribed in the common Receipts of this Looch, whose Foundation is the Decoction of Barley. The Roots of Butter-bur, and Elecampane augment the cutting quality of the other Ingredients, and facilitate expectoration. The Seeds of Mallows, Marsh-mallows, Cotton, and white-Poppy, serve to thicken and stop thin defluxions from the Head upon the Brest, and producing the same effects, as the seeds of Fennel and Line, prescribed in other Receipts, do not give the Looch that unpleasing taste or smell as they do. You may leave the Liquorice out of the Decoction, in regard it is mixt in Powder to a sufficient quantity in the Looch. Lastly, the distill'd Oyls of Annise and Fennel are better then the Seeds boyl'd in the Decoction, that destroys their Volatile and Sulphury part, which is the principal.

This Looch cannot but be of great virtue to thicken and stop thin defluxions from the Head upon the Lungs, as also to cut and loosen those that are already got into the Muscles of the Larynx, to cleanse and mollifie the parts that serve for Respiration.

It may be taken in the Day and Night-time, every foot, about the bigness of a little Nut at once, with a little stick of Liquorice scrap'd and bruis'd at the end. These Medicines must be kept a long time in the Mouth, and swallow'd slowly.

Looch Pectorale.

*R. Mucilaginis Gummi Tragacanthi in Aqua Rosarum extracta,
Sacchari Candi, &
Penidiati, pulveratorum, an.
Liquoritia,
Ireos Florentia,
Radici Enula Campana,*

*ʒ iij.
ʒ iij.
ʒ iij.
ʒ iij.*

A Pectoral Looch.

*R. Mucilage of Gum-Tragacanth, extracted in Rose-water,
Sugar-Candy, and
Penidite, powder'd, an.
Liquorice,
Florence-Orrice,
Root of Elecampane,*

*ʒ ii.
ʒ iij.
ʒ ii.
ʒ j.*

Put a dram of Tragacanth powder'd into a dish with 2 or 3 ounces of good Rose-water, set it over hot embers, stirring them from time to time with a Woodd'n-Spatula, till the Gum-Tragacanth be well dissolv'd, and reduc'd into a white-Past. Powder the Sugar-candy, and Penidiate in a Marble-mortar with a Woodd'n-Pestle; and adding to them the Mucilage, the powders of Liquorice, Orrice, and Elecampane, unite them together with equal parts of Magisterial Pectoral Syrup, and Syrup of white-Poppies, and reduce them to a consistency between a Syrup and a soft Electuary, which you may, if the Physician thinks fit, aromatize with distill'd Oyls of Annise, and Fennel, an. two drops, incorporated with half an ounce of fine powder'd Sugar.

The Vertues of this Looch come very near to those of the sound Looch. Nevertheless, you may change, increase or abate any of the Medicines, according to the condition of the Disease, and the Patient who is to make use of the remedy.

There is a preparation of Cassia with Sugar, to which the Ancients have given the name of a Looch, but it is rather to be put among the soft Electuaries, then among the Looches.

CHAP. XVIII.

Of Tablets, or Solid Electuaries.

THE use of Tablets so nearly resembles that of Looches, that they may well be rank'd in the next place; and so much the rather, because that Tablets are frequently prepar'd for diseases of the Brest, and are more frequently us'd then Looches. Tablets are sometimes more, sometimes less compounded, and their composition is different, according to the purpose for which they are compounded. Sugar is the ingredient most plentifully us'd in their composition; as well to please the taste of the Patient, as to bind and incorporate the other Drugs, which could not be reduc'd into a Solid form by the Sugar, did it not exceed them in quantity: unless you make use of the mucilages of Gum-Tragacanth; for they are able to bind several Medicaments without any mixture of Sugar. Tablets are made of a solid consistence, that they may be the more easily carry'd about in the Pocket, and that they may be held a long time in the Mouth, and that they may not be so soon dissolv'd as Syrups or Looches.

For the Preparation of Tablets, we use to dissolve Sugar in some Liquor, to clarify or scum it if there be occasion, to boyl it to the consistence of a solid Electuary, and to mixe with it while it is hot, sometimes Powders, sometimes Conserves, Conditements, Confections, Fruits beat'n in a mortar, distill'd Oyls, and sometimes Salts and Spirits. The proportion of the Powders to the Sugar cannot be well-limited, because of the various nature of the Powders, and the various purposes for which the Tablets are made. We use to put three ounces of Powder to one pound of Sugar, for solid Purgative-Electuaries. We also put sometimes the same quantity of Powder to every pound of Sugar for Pectoral Lozenges. But most frequently an ounce, or an ounce and a half serves turn, especially if the Medicament be of a strong scent or taste, or that operates in a small quantity. An ounce or an ounce and a half of Powder serves turn to a pound of Sugar for Cordial Lozenges; and almost the same proportion holds for Stomachical, Aperitive, Hepatic-Tablets.

But there must be great care tak'n in reference to Pulps, and other soft or liquid Substances, which are to compound Lozenges, which are usually mix'd when the Sugar is boyl'd. For besides that they may occasion some augmentation of the quantity of the Powders, you may either boyl the Sugar the more before the mixture, or slack'n boyling upon the fire after the Ingredients are mix'd, to consume the superfluous moisture that may be therein. In all which things the Artist must be guided more by his judgment then by any Rules that can be prescrib'd.

Saccharum Rosatum.

Sugar of Roses.

Rx. Sacchari albissimi contusi,
Aqua Rosarum fragrantissima,

℥j.
℥ iij.

Rx. Fine white Sugar grossly-beat'n, ℥j.
The most fragrant Rose-water, ℥ iij.

Pour the Rose-water upon the Sugar, and boyl them in a Posnet over a soft fire to the consistence of an Electuary. Take the Skillet from the fire, stir the Sugar with a Spatula, and when it begins to coagulate, pour it out upon a sheet of white Paper, or upon a Tin-dish to make Tablets. You may also mixe with the same boyl'd Sugar an ounce and a half of red Roses pulveriz'd, sprinkl'd with some few drops of Spirit of Sulphur or Brimstone. And these Tablets are call'd Conserve of drie Roses, or the Rock-Conserve.

Sugar of white Roses is deterfive with a little astringtion. It is very much us'd in all diseases of the Brest, as well for its pleasant taste, and ease which it gives: You may take it day and night at all hours. Sugar of Roses is also mix'd in Powder with Asses, Goats or Cows-Milk, and tak'n in a morning fasting. The dose is from two drams to an ounce, according to the quantity of Milk and the Palate of the Patient.

Tablets of red Roses are more binding. It is good to strength'n the Ventricle and the Liver, and to stop thin Rhumes that fall from the Head upon the Lungs. They are tak'n after the same manner as ordinary Sugar of Roses.

Tabellæ de Althea Simples & Compositæ.

Simple and Compound Lozenges of Marsh-mallows.

Rx. *Pulpæ Radicum Altheæ per setaceum tra-*
jecta, ʒ iiij.
Sacchari solidi, lb j β.
Aqua Rosarum, ʒ vj.
Fiam ex Arte Tabella.

Rx. Of the Pulp of the Roots of Althea
 pass'd through a Hair-sieve, ʒ iiij.
 Loaf-Sugar, lb j β.
 Rose-water, ʒ vj.
 Make Lozenges according to Art.

Choose out large well-grown Roots of Marsh-mallows, wash them and take off the rind, and having cut them into thin round slices, boyl them over a soft fire with Fountain-water in an Earth'n-glaz'd-pot, till they be very tender. Then bruise them in a Marble-mortar with a woodd'n-pestle, and pass four ounces of the pulp through the wrong side of a Hair-sieve. Put a pound and a half of fine Sugar with six ounces of Rose-water into a Skillet, and boyl them to the consistence of a solid Electuary, wherein you must dissolve the pulp; then setting the Skillet over the fire for a very small time to evaporate the superfluous moisture, make your Lozenges.

Quod si compositas volueris,

If you desire them compounded,

Rx. *Pulpæ prædictæ,* ʒ ij.
Seminis Papaveris alb. confusi,
Pulveris Ircos Florentiæ,
Diatragacanthi frigidi, &
Glycyrrhizæ, an. ʒ iiij.
Sacchari albißimi in Aqua Rosarum soluti,
& in Electuarium solidum cocti, lb j.

Rx. Of the fore-said Pulp, ʒ ij.
 Seed of white Poppy beat'n,
 Powder of Florence-Orrice,
 Cold Diatragacanth, and
 Liquorice, an. ʒ iiij.
 Whitest Sugar dissolv'd in Rose-water,
 and boil'd to the consistence of a solid Ele-
 ctuary, lb j.

Boyl the Sugar and the Rose-water to the consistence of a solid Electuary: take the Skillet from the fire, and first mixe the Pulp prescrib'd, after that the Powders; and make your Lozenges of what form or bigness you please.

You may mixe with the Powders a dram of Magisterie of Sulphur. You may also in the same manner make several other Pectoral-Lozenges.

Tablets of Althea are us'd to remedie old and new Coughs, and in all diseases of the Brest; especially to carry off the acrimony of the humours, and to stay Desfluxions. They are to be tak'n at all times, like Tablets of Sugar of Roses.

Succus Liquoritiæ Niger.

Black Juice of Liquorice.

Rx. *Extracti Liquoritiæ consistentia molli-*
oris,
Sacchari opt. pulverati, an. lb ij.
Gummi Arabici soluti & colati ʒ j.
Mucilaginis spissioris Gummi Tragacanthi
in Aqua Rosarum extracta, ʒ j β.

Rx. Extract of Liquorice of a softer con-
 sistencie,
 Fine-powder'd Sugar, an. lb ij.
 Gum-Arabick dissolv'd and strain'd, ʒ j.
 Thicker Mucilage of Gum-Tragacanth,
 extracted with Rose-water, ʒ j β.

Beat them and incorporate them well together in a Marble-mortar with a woodd'n-pestle, and make them into Rolls, Tablets or Lozenges as you please.

The Gum-Arabick must be pass'd through a Hair-sieve, being first powder'd and dissolv'd in Rose-water.

I have plac'd this Composition among the Tablets, as well for its Consistency, as for the Form of making it up.

There are several Preparations of the Black Juice of Liquorice, as well in Spain as in several Towns in France; and the quick vent there is for it, causes the Women to deal in it. But I take the Receipt which I have set down to be superiour to theirs, in regard it contains all the vertue and good taste that can be expected.

The use of it is too familiar to want directions.

Succus

Succus Liquoritiæ Albus.

<i>R. Pulveris Liquoritiæ mundatæ,</i>	
<i>Radiciæ Ireos Florentiæ,</i>	3vj.
<i>Amyli,</i>	3ij.
<i>Sacchari opt. subtiliter pulverati,</i>	lbj.
<i>Moschi Orientalis,</i>	
<i>Ambragrisæ, an.</i>	Gr. iij.

White Juice of Liquorice.

<i>R. Clean-powder of Liquorice,</i>	
<i>Roots of Florence-Orrice, an.</i>	3vj.
<i>Flower of Wheat pounded,</i>	3ij.
<i>The best Sugar finely-powder'd,</i>	lbj.
<i>Oriental Musk,</i>	
<i>Ambergrise, an.</i>	Gr. iij.

Incorporate all these together with a muscilage of Gum-Tragacanth extracted in Rose-water, mixing and beating them together in a Marble-mortar with a woodd'n-pestle into a solid paste. Make them up into Rolls or Tablets, and drie them by the fire upon a white sheet of Paper.

This Composition is improperly call'd by the Name of Juice of Liquorice; since there is nothing but the Powder of Liquorice in it. But in regard that custom has prevail'd to continue the Name, we thought it convenient to place it here.

This Juice of White Liquorice is more pleasing then the Black, but much inferior to it in vertue. Yet it is as much or more in request, because of its acceptable taste and smell.

Manus Christi Perlata.

<i>R. Sacchari albißimi in frusta dissecti,</i>	lbj.
<i>Aqua Rosarum fragrantissima,</i>	3 iij.

Manus-Christi Pearl'd.

<i>R. Finest white Sugar brok'n into pieces,</i>	lbj.
<i>Fragrant Rose-water,</i>	3 iij.

Boyl them together over a moderate fire to the consistence of a solid Electuary, and when they are half-cold, incorporate with them half an ounce of Oriental-Pearl, and make up your Tablets according to Art.

These Tablets are call'd by the Name of *Manus-Christi* or Sugar of Roses Pearl'd, by reason of the Ingredients whereof they are compos'd. Their principal vertue is to comfort and fortifie the Heart and Noble-parts: they may be tak'n alone, at any time; but their chief use is in Juleps and Cordial-Potions.

Tabellæ Cachecticæ, D. D.
D'AQUIN.

<i>R. Diaphoretici mineralis, &</i>	
<i>Oculorum Cancrorum preparatorum, an.</i>	3ß.
<i>Margaritarum preparatorum,</i>	3ij.
<i>Salis Martis,</i>	3ß.
<i>Olei Cinnamomi stillatitii,</i>	Gut. ij.
<i>Sacchari opt. pulverati,</i>	3 viij.

Tablets for those that are troubl'd with
an Ill-habit of Body, by D. D.
D'AQUIN.

<i>R. Diaphoretic-mineral, and</i>	
<i>Crabs-Eyes prepar'd, an.</i>	3ß.
<i>Pearls prepar'd,</i>	3ij.
<i>Salt of Steel</i>	3ß.
<i>Distill'd oyl of Cinnamon,</i>	Drop ij.
<i>Double-refin'd Sugar powder'd,</i>	3 viij.

Dissolve over hot embers a dram of Gum-Tragacanth in four ounces of Orange-flower Water, and reduce it into a muscilage, wherewith to unite and bind all the Ingredients prescrib'd. Then beat them into a thick paste, to make your Tablets of the weight of two drams each for a dose, and dry them in the shade.

These Tablets are of incomparable vertue to op'n gently all obstructions of the Bowels, particularly of the Spleen. For which reason they are giv'n with great success in Hypochondriac distempers and Cachexies: as; also to cure the Green-sickneß, and difficulty of making Urine. They may be tak'n when you drink Mineral-waters, if they do not pass through quickly as they should. The dose is one Tablet in a morning fasting, two hours before you eat any thing else.

Tabellæ Cardiaca.

Rx. Sacchari albissimi in Aqua florum Arantiorum soluti, & in Tabulati solidiorem consistentiam cocti, ℥j.

When the Sugar is boyl'd, take it off the fire, and when it is half-cold,

Permisce,

Confectionis Alkermes perfecta, ʒj.
Corticis exterioris Citri minutissime incisi,
&
Antimonii Diaphoretici, an. ʒij.
Olei Cinnamomi stillatitii paucio Saccharo excepti, Gut. j.

Mixe them well together, and pour out the whole upon a Plate of fine Tin, or upon a sheet of white Paper to make your Tablets of what bigness you please.

These Tablets are admirable to cherish the Natural-heat. They restore an extraordinary vigour immediately to all the parts, rallying the scatter'd Spirits. They powerfully strength'n the Heart and Brain. They are an incomparable preservative against Pestilential air, they correct ill-smells of the Mouth and Breath. They are useful to those that are in want of a Provocative to *Venerie*. They may be tak'n at any time, but especially fasting, from a dram to two. But you may take half an ounce when you desire a more powerful operation, especially they that have weak Backs, to whom they will be of more force by adding half a dram of Amber-grise and a scruple of Musk.

Tabellæ Stomachicae.

Rx. Sacchari albissimi, ℥j.
Aque Stillatitiae corticum Citri, ʒij.

Boyl them over a moderate fire to the consistency of a solid Electuary.

Deinde adde,

Nucem Moschatam Saccharo conditam confusam, & per Cribrum trajectam,
Pulpæ Pistachiarum, ʒvij.
Corticum recentium exteriorum Citri, &
Arantiorum minime incisorum,
Cinnamomi electi, &
Macis subtiliter pulveratorum, an. ʒij.

Beat the Nutmeg in a Marble-mortar with a woodd'n pestle and six drams of pulp of Pistaches, and pass them through the wrong side of a Hair-sieve; cut the peels very small, powder the Cinnamon and Mace. Then put in first the Nutmeg and Pistaches, after that the Peels, then the Powders, and when they are all well-incorporated make up your Tablets.

These Tablets are of a most pleasing scent and odour. They are call'd *Stomachical*, because of their incomparable vertue to strength'n the Stomach, to increase the Appetite and facilitate Concoction and Distribution of the Nourishment. They are marvellously effectual to expel Wind and hinder the putrefaction of the Humours. The dose is two drams fasting and just after meals, the use whereof you may continue as you see cause.

Cordial Lozenges.

Rx. Double-refin'd Sugar dissolv'd in Orange-flower Water, and boyl'd to the consistency of a solid Electuary, ℥j.

Mingle with it,

Confection of Alkermes perfect, ʒj.
Outward-peel of Citron cut very small, and
Diaphoretic Antimony, an. ʒij.
Distill'd-oyl of Cinnamon mix'd with 2
drams of fine-powder Sugar, Drops j.

Stomachical Tablets.

Rx. Double-refin'd Sugar, ℥j.
Distill'd-water of Citron-peels, ʒij.

Then add,

One Nutmeg condited with Sugar, powder'd and pass'd through a Sieve,
Pulp of Pistaches, ʒvij.
New outward Citron and Orange-peels cut very small,
Choice Cinnamon, and
Mace finely powder'd, an. ʒij.

Tabulæ contra Vermes.

<i>R. Rhabarbari electi,</i>	
<i>Semen Citri mundatum,</i>	
<i>Contra Vermes,</i>	
<i>Portulaca,</i>	
<i>Caulium, &</i>	
<i>Genista subtiliter pulverati, an.</i>	3 iij.
<i>Mercurii dulcis pulverat.</i>	3 ij.
<i>Sacchari Albiſſimi pulverat.</i>	3 xvj.

Lozenges against the Worms.

<i>R. Choice Rhubarb,</i>	
<i>Seeds of Citron Cleans'd,</i>	
<i>Worm-Seed,</i>	
<i>Purslane,</i>	
<i>Coleworts, and</i>	
<i>Brome finely powder'd, an.</i>	3 iij.
<i>Sweet Mercury powder'd,</i>	3 ij.
<i>Double refin'd Sugar powder'd,</i>	3 xvj.

Beat all the Ingredients into fine powder, mixe and incorporate them very well together with mucilage of Gum-Tragacanth drawn with Orange-flower Water, and having reduc'd the whole into a paste somewhat solid, make up your Tablets each weighing a dram, of which give one or two to a Child in a morning, fasting, and three or four at a time to Persons of riper Years.

These Lozenges kill Worms in the Stomach and Bowels. They may be tak'n at any time in a morning fasting, but the best time is the three last days of the Moon.

Tabellæ de Croco Martis Simples.

<i>R. Croci Martis Nigri, junctiōe Sulphuris</i>	
<i>cum Chalybe candente parati, & subtiliter</i>	
<i>pulverat.</i>	3 j.
<i>Pulveris Cinnamomi electi.</i>	3 ij.
<i>Sacchari optimi pulverat.</i>	3 iij.

Single Lozenges of Crocus Martis.

<i>R. Crocus Martis prepar'd by applying a</i>	
<i>cake of Brimstone to Steel soldering</i>	
<i>hot and powder'd,</i>	3 j.
<i>Powder of pick'd Cinamon,</i>	3 ij.
<i>Double-refin'd Sugar powder'd,</i>	3 iij.

Incorporate them in a Marble-mortar with Mucilage of Gum-Tragacanth, reduce them into an indifferent thick paste to make your Lozenges, each of the weight of two drams or thereabout, which are to be dry'd in the shade.

These Tablets are chiefly against the Retention or Irregularity of the *menstruums*, drinking after it three or four ounces of white Wine or some Hysterick-water, and waking upon that for half an hour, not eating any thing in two hours afterwards. It may be tak'n for several days, and the use of it renew'd upon occasion.

Tabellæ de Croco Martis Compositæ.

<i>R. Croci Martis Aperientis,</i>	3 ij.
<i>Cinnamomi acutissimi,</i>	
<i>Rhabarbari Electi,</i>	
<i>Fœculum Bryoniæ, &</i>	
<i>Croci opt. subtiliter pulveratorum, an.</i>	3 ij.
<i>Sacchari Albiſſimi in Aqua Artemisiæ solut.</i>	
<i>& in Electuarius solidum cocti,</i>	3 ix.

Compound Tablets of Crocus Martis.

<i>R. Opening Crocus Martis,</i>	3 ij.
<i>The most biting Cinamon,</i>	
<i>Chos'n Rhubarb,</i>	
<i>Hard'n'd white Juice of Bryony-root, and</i>	
<i>The best Saffron finely-powder'd, an.</i>	3 ij.
<i>Double-refin'd Sugar dissolv'd in Mug-</i>	
<i>wort-water, and boy'd to a solid Electary,</i>	3 ix.

When the Electuary is half-cold incorporate the powders, and make up your Tablets, each weighing about two drams.

These Tablets are highly esteem'd for provoking the *menstruums*, and freeing the *Materia* from impurities. They op'n the obstructions of the Liver, Spleen, and all the Bowels, and are an excellent Remedy against the Green-sickness, Cachexies, Jaundice, Dropsies; as also Lienteries. For by opening obstructions, they facilitate the distribution of the Nourishment. The dose is from two drams to half an ounce. They must be tak'n in a morning fasting, drinking after them two or three ounces of Wormwood-wine, or else as much Mugwort-water, and walking upon that for half an hour; it may be tak'n for fifteen days together, and longer if necessity requires. Two hours after the Patient is at liberty to eat.

Tabellæ

Tabellæ Magnanimitatis.

℞. <i>Pulpa Pistachiarum.</i>	
<i>Radicum Satyrionis conditarum,</i>	
<i>Conserve Florum Rosimarini, &</i>	
<i>Confectionis Alkermes cum Ambra & Mosco</i>	
<i>parata, an.</i>	℥β.
<i>Truncorum Viperinorum, &</i>	
<i>Hepatum,</i>	
<i>Margaritarum Orientalium preparatarum,</i>	
<i>an.</i>	℥iij.
<i>Seminis Erueæ,</i>	℥ij.
<i>Renum Scincorum,</i>	
<i>Cardamomi minoris,</i>	
<i>Radici Galangæ, an.</i>	℥j.
<i>Caryophyllorum,</i>	
<i>Cinnamomi,</i>	
<i>Macis,</i>	
<i>Ambra Griseæ, an.</i>	℥β.
<i>Moschi Orientalis,</i>	℥β.
<i>Sacchari in Aqua Florum Arantiorum so-</i>	
<i>luti, & in Electuarius solidum cocti,</i>	℥b j.

Lozenges of Magnanimity.

℞. Pulp of Pistaches,	
Condited Roots of Satyrion.	
Conserve of flowers of Rosemary, and	
Confection of Alkermes prepar'd with	
Amber and Musk, an.	℥β.
Bodies of Vipers, and	
Livers,	
Oriental Pearls prepar'd, an.	℥iij.
Seed of Rocket,	
Reins of Land-Crocodiles,	
Lesser Cardamoms,	
Root of Galanga, an.	℥j.
Cloves,	
Cinnamon,	
Mace,	
Ambergrise, an.	℥β.
Oriental Musk,	℥β.
Sugar dissolv'd in Orange-water, and	
boyl'd to a solid Electuary,	℥b j.

Beat the Pistaches, Satyrion-roots and Conserve of Rosemary-flowers in a Marble-mortar; and strain the Pulp through the wrong side of a Hair-sieve. Pulverize the Bodies and livers of Vipers, and Land-Crocodiles; the Root of Galanga, the Cardamoms, Cloves, Mace, Ambergrise and Musk, mixe them with the prepar'd Pearls, and when the Sugar boyl'd in Orange-flower Water to a solid Electuary is half-cold, incorporate the Pulp, Confection and Seeds; and make your Lozenges about two drams each.

These Lozenges are highly esteem'd for those that are cold in the act of *Venerie*. Take one or two at a time at Night or Morning, drinking after it two or three ounces of *Spanish-wine*. They may be eat'n also in the Day-time between Meals, one Lozenge at a time, using them as long as necessity requires. In the mean time the Patient must take care to keep a good Diet, and to avoid melancholy.

CHAP. XIX.

Of Powders.

THE Name of Powder is giv'n to dry Substances, when either by Art or Nature they are reduc'd into distinct particles, one from the other. This Natural reduction happ'ns to Wood through rott'nness, as also to several Roots, and to Lime after it is burnt. But these Natural Powders are not the subject of this Chapter, which is to treat only of Artificial Powders, whose Substance may be divided into smaller or grosser parts, according to their diversity, and the necessity of the *Apothecary*. The way to make this Reduction I have spok'n of in the Chapter of *Trisuration*. The necessity of Powders is allow'd both by the *Galenic* and *Chymic-Pharmacy*, without which the most part of Medicines are not to be prepar'd; but setting aside particular Powders prepar'd for particular Medicines, in this Chapter I shall only treat of those that go under the general Name of Powders, and are so acknowledg'd to be, as being most usually prepar'd and kept.

Pulvis Viperinus.

Powder of Vipers.

℞. Corpora Viperina cutē spoliata, Capite & Cauda muſtila, exenterata, ſervatis Corde & Hepate, & in umbra ſiccata, quantum libuerit.

℞. The Bodies of Viper's ſlea'd (the Head and Tail cut off, the Entrails tak'n out, reſerving the Heart and Liver) as many as you pleaſe.

Wash the Bodies, Hearts and Livers with white Wine, and hang them up to dry in the ſhade. When they are perfectly drie, cut them very ſmall with a pair of ſciſſors into a large Braſs-mortar, and having beat'n them to powder, ſift them through a Silk-ſieve, and keep the powder for your uſe.

The great applauſe that the greateſt number of Naturaliſts have giv'n to Vipers, the groſs miſtakes of the Ancients, as well in relation to the parts of their Bodies, as the nature of their Venome, and the great uſe that has been made of them for this many Years, and particularly in this Age, have encourag'd me briefly here to deſcribe the principal marks that diſtinguiſh them from other Serpents, and give us an aſſur'd knowledg of them.

The Viper's Head, conſidering the proportion of her Body, is flatter and larger, then the Head of any Serpent. The end of the Snout turns up like a Pig's. The length of the Body is not above half an Ell, and the bigneſs not above an Inch. It has two large Teeth, crooked, hollow, transparent and very ſharp, about 2 * *Lignes* long, and as big as a little Pin towards the point; and a little more towards the bottom, which other Serpents have not. They are ſtrongly joyned into the foremoſt bones forward from the Scull, flexible in their joyning, and fix'd upon each ſide of the upper-Jaw. Below adjoining to the root of theſe great Teeth, are others much a-like in ſhape and figure, but ſlenderer and much looſer. Theſe great Teeth lie generally bow'd toward the Throat of the Viper, but ſhe can raiſe them, and make uſe of them to bite when ſhe pleaſes, either in revenge or to kill her prey. The bottom of theſe great Teeth is environ'd with a little bag, containing, to the quantity of a drop, a Juice ſlimy, yellow, inſipid and harmleſs, which proceeds from a great number of ſlimy-kernels, which the Viper has includ'd behind each Eye toward the Temples, which is let out and kept in, as in a Receptacle, to diſcharge the ſuperfluities of the Brain, to moiſt'n the Ligaments that belong to the Articulation of the great Teeth, and to preſerve their flexibility, and to nourish the other Teeth. The Viper has but one row of Teeth upon each Jaw, whereas other Serpents have two. The neck is not ſo long, and leſs thick; the Tail is alſo ſhorter then that of other Serpents, eſpecially that of the Female. The Viper has no ſtinking ſmell in any part of her Body, whereas the inwards of other Serpents are ſo noyſom as not to be endur'd. The Viper creeps very ſlow, nor caſt it ſhoot forwards as other Serpents do; though it be very quick and nimble to bite Man or Beaſt when provok'd. Some have vainly affirm'd that being hung by the tail it cannot rear it ſelf. But though it cannot do it ſo quickly as other Serpents, however it will be ſure to raiſe it ſelf, and lay hold upon the Pincers with which you hold her by the tail. The Teeth of the Male are like thoſe of the Female in number and ſhape, contrary to the opinion of the Ancients, and his Natural-parts doubly cover'd with hard and ſharp points. The Female has alſo a double Matrix, though the firſt entrance be not ſo. The upper-part of the Body of both are of two colours; the ground whereof is generally of a grey, more clear or more dark, or elſe of a yellow more inclining to gold'n, or to red. This Ground is very proportionably variegated with long ſpots of a Brown colour inclining to black. The long Scales a-thwart the Belly, which ſerve them to creep withal, are of the colour of poliſh'd Steel. The Viper alſo differs from other Creatures in this, that ſhe brings forth her Young-ones alive, whereas other Serpents lay Eggs, which they ſit upon and hatch.

This Powder is very much enliven'd with the volatile Salt, wherewith the Vipers abound, which enables it to force its virtues through the Pores, though never ſo cloſe ſhut, to the moſt remote parts of the Body. It is a ſingular Medicine to cure Scabs, Itches and Eryſipelas; and particularly the Leproſie. It reſtores plumpneſs of Body to Perſons waſted with long Agues and tedious Diſeaſes. It gives remarkable relief to the Ptiſical and Conſumptive; preſerves the Natural-heat, aſſiſts Concoction, and diſtribution of the Chylus. The uſe of it is very whoſom in Epidemic diſtempers, and to

to prevent and overcome Venomes that act by a malignant occult quality, particularly that of the Viper, and all sorts of Serpents. It is to be tak'n fasting in Broths, Wine, or any other Cordial Liquor; or else incorporated with some Syrup, or in some Confection like a Bolus. It may be also mix'd in Opiates, or in liquid or solid Electuaries, as also among other Powders. The dose is from ten to twenty or thirty grains, as also to a dram. It works insensibly, not provoking Sweat, unless the dose be great. It may be also tak'n for a good while together.

**Pulvis Comitissæ Cantii, seu de
Chelis Cancrorum.**

*The Countess of Kent's Powder: or, The
Powder of Crabs-Claws.*

<i>Rx. Extremitatum nigrorum pedum majorum Cancrorum marinarum,</i>	<i>℥iiij.</i>	<i>Rx. The black extremities of the feet of large Sea-Crabs,</i>	<i>℥iiij.</i>
<i>Oculorum Cancrorum fluviatiliū,</i>		<i>River-Crabs-Eyes,</i>	
<i>Margaritarum Orientalium, &</i>		<i>Eastern-Pearls, and</i>	
<i>Coralli Rubri præparatorum, an.</i>	<i>℥j.</i>	<i>Red-Coral prepar'd, an.</i>	<i>℥j.</i>
<i>Succini Albi,</i>		<i>White Amber,</i>	
<i>Radici Contrayerva,</i>		<i>Root of Contrayerva,</i>	
<i>Viperina, seu</i>		<i>Spanish-Counterpoyson, an.</i>	<i>℥vj.</i>
<i>Contrayerva Virginiana, an.</i>	<i>℥vj.</i>	<i>Bezoar-Stone,</i>	<i>℥iiij.</i>
<i>Lapidis Bezoar,</i>	<i>℥iiij.</i>	<i>Deer's Heart-bone,</i>	<i>℥iiij.</i>
<i>Ossis e Corde Cervi,</i>	<i>℥iiij.</i>	<i>Saffron,</i>	<i>℥ij.</i>
<i>Crocī,</i>	<i>℥ij.</i>		

All these being finely powder'd, let them be sprinkl'd with an ounce and a half of Spirit of Honey, and mix'd with Gelly of Vipers. Make up your Trochishes, dry them in the shade to be powder'd when use requires.

Take the Sea and the River-Crabs in the Month of June, while the Sun is in Cancer. Take and cut the Flesh from the extremities of the Claws, braise the Claws and Crabs-Eyes in a Bras-mortar first, then grind them upon a Porphyrie, moist'ning them with some Cordial-water; and spread the Powder upon clean Paper, to be dry'd in the shade. Prepare the Pearl, Coral, and Amber-grise in like manner. Beat the Bezoar in a Bras-Mortar, and mix all the Powders. Then in a glaz'd-Earth'n-pot over a very gentle fire, boyl four large Vipers, well prepar'd, in a pint of Balm-water, till the Broth be reduc'd to the consistency of a Gelly. Strain it and press out the Vipers. Then put the Powders into a great Marble-Mortar; and when they have suckt up the Honey prescrib'd, add at several times the Gelly of Vipers, till the whole Mass be become thick and solid enough to make Trochishes, to be dry'd and us'd as before.

The Gelly of Vipers, is not only to unite and bind the Powders together, and reduce them to a proper Paste and fit solidity, but to impart to the Composition, the Cordial, and Poyson-resisting vertue of the Vipers, though the Ancients neglected the Gelly of Vipers, and refus'd it as Impertinent.

I might have plac'd this Composition in the Chapter of Trochishes, but I thought fit to imitate the English, from whence first it came, and who gave it the name of Powder.

This Powder is very famous, and in high request in England, against Epidemic Distempers, particularly against the Small-pox, and Measles. It is also highly commended for the Plague, as well to preserve, as cure. For it strength'ns the Heart, and all the Noble-parts, against the malignity of these Diseases, against Pestilential-Air, and preserves them from all sorts of Infection. Nor is it less esteem'd in France, by Persons that know the vertue of it, and who have often try'd it with good success. The Dose and manner of using it, is the same with that of the Spirit of Vipers.

Pulvis Aromatici Rosati.

<i>Rosarum Rubrarum exungulatarum siccum,</i>	℥ xv.
<i>Glycyrrhiza Rasa,</i>	℥ viij.
<i>Cinnamomi Acutissimi,</i>	℥ v.
<i>Ligni Aloes,</i>	
<i>Santali Citrini, ana.</i>	℥ iij.
<i>Caryophyllorum,</i>	
<i>Macis,</i>	
<i>Nardi Indicæ</i>	
<i>Gummi Arabici,</i>	
<i>Tragacanthi, an.</i>	℥ ij ℥.
<i>Nucis Moschatæ,</i>	
<i>Cardamomi minoris,</i>	
<i>Galangæ, an.</i>	℥ j.
<i>Ambra-Griseæ,</i>	℥ ij.
<i>Moschi Orientalis,</i>	℥ j.

Powder of Aromatic Rosatum.

<i>Dry red-Roses cleans'd from their white bottoms,</i>	℥ xv.
<i>Scrap'd Liquorice,</i>	℥ viij.
<i>Quick-biting Cinamon,</i>	℥ v.
<i>Lignum Aloes,</i>	
<i>Yellow Saunders, ana.</i>	℥ iij.
<i>Cloves,</i>	
<i>Mace,</i>	
<i>Indian Spikenard,</i>	
<i>Gum-Arabic,</i>	
<i>Tragacanth, an.</i>	℥ ij ℥.
<i>Nutmegs,</i>	
<i>Lesser Cardamom.</i>	
<i>Galangæ, an.</i>	℥ j.
<i>Amber-grise,</i>	℥ ij.
<i>Oriental Musk,</i>	℥ j.

According to the general Rules of Trituration, bruise and pound the Wood first in a brazen-Mortar, then add the Galanga, Liquorice, and Spikenard: which must be beaten for some time with the Wood: next add the Cinamon and Gums; Lastly, the Cloves, Nutmegs, Cardamoms, Mace, and Red-Roses: beat them among the rest, and sift the Powder through a fine silk-sieve. Then beat a-part in a little Mortar the Amber-grise, and Musk, mixing with them, never so little Oyl of Nutmegs, to prevent them from sticking to the Mortar, and having sifted them through the same sieve, mix them with the rest of the Powders; which will be then fit to be put up for use.

Were there a greater quantity of Gum-Arabic, and Tragacanth in the Powder, the best way would be to beat them apart in a large brazen-Mortar heated, but being so little, they may be conveniently enough beaten with the rest. It is not worth while to stand to cut the Woods, or the Spikenard, when you may do as well by beating them in the large Mortar, with the rest of the Drugs.

This Powder is highly esteem'd for strength'ning the Brain, and Stomach. It dissipates the superfluous moisture of the Entrails, resists Putrefaction, creates an Appetite, stays Vomitings, and want of retention in the Intestines, and is very proper to strengthen and restore such as are newly recovered from sickness. The Dose is from half a scruple to half a Dram in Wine, Broth, or any Cordial-Liquor. It may be reduc'd into a soft or solid Electuary, with a proportionable quantity of Sugar, or mixt with Opium, Potions, or other Medicines.

Pulvis Diarrhodon emendatus.

<i>Rosarum Rubrarum exungulatarum,</i>	℥ j ℥.
<i>Santali Citrini, &</i>	
<i>Rubri, an.</i>	℥ iij.
<i>Ligni Aloes,</i>	
<i>Cinnamomi,</i>	
<i>Rapontici,</i>	
<i>Nardi Indicæ,</i>	
<i>Rasura Eboris,</i>	
<i>Offis e corde Cervi,</i>	
<i>Croci,</i>	
<i>Mastices,</i>	
<i>Cardamomi minoris,</i>	
<i>Gummi Tragacanthi, &</i>	
<i>Arabici,</i>	
<i>Succi Glycyrrhizæ,</i>	
<i>Seminis Anisi,</i>	
<i>Feniculi,</i>	

The Powder Diarrhodon, reform'd.

<i>Red Roses cleans'd,</i>	℥ j ℥.
<i>Yellow-Saunders and</i>	
<i>Red, an.</i>	℥ iij.
<i>Lignum Aloes,</i>	
<i>Cinamon,</i>	
<i>Rhubarb of Pontus,</i>	
<i>Indian-Spikenard,</i>	
<i>Shavings of Ebony,</i>	
<i>The bone of a Deers-heart,</i>	
<i>Saffron,</i>	
<i>Mastick,</i>	
<i>Lesser Cardamom,</i>	
<i>Gum-Tragacanth, and</i>	
<i>Arabic,</i>	
<i>Juice of Liquorice,</i>	
<i>Seed of Annise,</i>	
<i>Fennel,</i>	

Oxyi;

Ocymi,
Melonum, &
Cucumeris, mundatorum, &
Margaritarum preparatarum, ana. 3j.
Ambragrise, Gr. viij.
Moschi Orientalis, Gr. iij.

Basil,
Melons, and
Cucumbers, cleans'd and
Prepar'd Pearls, an. 3j.
Ambragrise, Gr. viij.
Oriental Musk, Gr. iij.

Make a Powder according to Art.

They who will compare the Receipt of this powder, with that which is to be found in several Dispensatories, under the name of an Abbot, will find that the Doses are reform'd; that the Yellow-Saunders is put instead of the White, the shavings of Ivory, in the stead of Spodium or burnt-Ivory, Raphontic instead of Rhubarb, and that several Seeds are left out, which gave more trouble to the Artift, then vertue to the Medicine. There is no question, but that Yellow-Saunders is better than White, and that Rhubarb whose purgative vertue is not proper upon this occasion, ought to give place to Raphontic, whose qualities agree with the purposes for which this powder was design'd. There is nothing superfluous in this powder, and the Doses and proportion of the Ingredients are such, that the effects cannot but be answerable to what Writers have attributed to this composition.

This powder is of great use to fortifie the Stomach, create an Appetite, and expel Wind. It is particularly appointed for maladies of the Liver and Spleen, Jaundies, Ptisicks, difficultness of the Intestines, Weaknesses and Faintings of the Heart. It also consumes the superfluous moistures of the Stomach. The Dose and manner of using this powder is the same with the preceding.

Pulvis Diamargariti Frigidi.

Powder of cold Diamargaritum.

R. Margaritarum Orientalium preparatarum, 3ß.
Rosarum rubrarum exungulatarum,
Florum Nymphae, &
Violearum, an. 3 iij.
Ligni Aloes,
Santalæ Rubri, &
Citri,
Radici Tormentillæ,
Dittami Albi,
Pentaphylli,
Baccarum Myrti,
Granorum Kermes,
Seminis Melonum excorticati,
Endivie, &
Oxalidis,
Rasura Eboris, &
Cornu Cervi,
Coralli Albi, &
Rubri preparatorum, an. 3 ij.
Ambragrise, &
Foliorum Auri, an. 3ß.
Moschi Orientalis, Gr. iij.

R. Oriental Pearls prepar'd, 3ß.
Red-Roses cleans'd,
Flowers of Water-Lillies,
Violets, an. 3 iij.
Lignum-Aloes,
Saunders Red, and
Yellow,
Roots of Tormentil,
White Dittany,
Cinquifoyl,
Myrtle-berries,
Graines of Kermes,
Seeds of Melons husk'd,
Endive, and
Sorrel,
Shavings of Ebony,
Harts-horn,
Coral White, and
Red prepar'd, an. 3 ij.
Ambragrise, and
Leaves of Gold, an. 3ß.
Oriental Musk, Gr. iij.

Make a Powder according to Art.

There is no composition in request, the Receipt whereof varies more in all Dispensatories then this Powder, that bears the name of no Authour. However, I am perswaded that this very Receipt is not inferiour to any of the other, as well for the choice as for the Doses of the Ingredients. This Powder carries the name of Pearls, which are the foundation of it, and are us'd in greater quantity here, then any other of the Ingredients. It is call'd cold, because it admits of many cold Ingredients, or else but moderately hot, and to distinguish it from another which is nam'd the hot, which

which is not now in use. The preparation of this Powder is like the former. The principal use of cold Diamargaritum is to strength'n the Noble parts, restore their languishing force, to cure fainting and Swouning-fits, in Fevers, and other Diseases. It is giv'n to Asthmatic, and Consumptive persons, and to those that are wasted and brought low by long sickness. The Dose and manner of using, are the same with other Cordial-powders, which I have already set down.

Pulvis Lætificans.

℞. Seminis Ceymi Caryophyllati,
℞. Ceyci,
Zedoaria,
Santalii Citrini,
Caryophyllorum,
Corticis exterioris Citri seci,
Galangæ,
Macis,
Nucis Moschate,
Storacis Calamitæ, an. 3ijß.
Rafise Eboris,
Seminis Anisi,
Thymi,
Epithymi,
Margaritarum Orientalium preparat,
Offis e corde cervi, an. 3j.
Ambra-Grise,
Moschi Orientalis,
Foliorum Auri et Argenti, an. 3j.

A Powder creating Chearfulness.

℞. Seeds of Clove-Basil,
Saffron,
Zedoary, or Set-wall,
Yellow-Saunders,
Cloves,
Outward peel of Citron, dry,
Galanga,
Mace,
Nutmeg,
Calamite Storax, an. 3ijß.
Shavings of Ivory,
Anise seed,
Thyme,
Dodder of Thyme,
Oriental Pearls prepar'd,
Deer's Heart-bone, an. 3j.
Ambre-grise,
Oriental Musk,
Leaves of Gold, and Silver, an. 3j.

Make a Powder according to Art.

It imports not to know the Name of the Inventor of this Powder, the Receipt whereof agrees indifferently well in most Dispensatories. You may follow this which I have here set down, the Preparation being the same with the former. You must know, that though the Leaves of Gold and Silver may contribute some vertue to this, and other compositions, yet they are here chiefly us'd for Ornament. For which reason they are not usually pulveriz'd and jumbld with other Ingredients, but cut in little distinct bits, for beauty's sake, as Pills, and Cordial-Opiates are wrapt up in them to take away the ill taste.

This Powder is highly esteem'd to correct the cold and moist temperature of the Stomach and Liver, to help Digestion, and restore the Appetite. It is also very proper against Weaknesses, and Palpitations of the Heart, to restore a good habit of Body, and to bring a good colour into the Face, to keep the Breath sweet, restore decay'd Strength, and dissipate Melancholy that proceeds from an Internal or no real cause. The Dose is the same with the preceding Powders.

Pulvis Diatrion Santalon.

℞. Santali Citrini,
Albi, et Rubri,
Semini Violarum,
Rosarum Rubrarum Exungularum,
Rapontii,
Rafise Eboris,
Succi Glycyrrhizæ, an. 3ij.
Gummi Tragacanthæ, et Arabici,

Powder of the three Saunders.

℞. Saunders Yellow,
White, and Red,
Seeds of Violets,
Red Roses cleans'd, an. 3ß.
Pontic Rhubarb,
Shavings of Ivory,
Juice of Liquorice, an. 3ij.
Gum Tragacanth, and Arabic,

Seminum

*Seminum Endivia,
Portulaca, &
Melonis excorticati, an.*

3j.

Seeds of Endive,
Purslain,
Melons husk'd, an.

3j.

Make a Powder according to Art.

They that desire to make the Powder more red, beginning with the Saunders, must moisten them with Rose-water, and beat them a long time, and moisten them often, till they are sufficiently colour'd, and when they are dry, add the other Ingredients, and perfect the Powder, which must be sifted through a fine silk sieve.

I am of opinion that the Amydon, or flower of pounded Wheat, together with some part of the Seeds were with judgement left out; for besides that the Amydon signifies nothing, the excess of Seeds might cause putrefaction in the powder.

This powder is highly commended against Diseases that proceed from weakness, or ill habit of the Liver; to temper the heat of the Entrails, to digest and discuss matters gather'd together at the end of Agues. It is also very proper in faintings of the Heart, Jaundies, and Ptsicks. It is giv'n inwardly in Potions, Opiates, and Electuaries, and outwardly apply'd in Epithems, Frontals, and Liniments.

Pulvis Pannonicus.

*R. Boli Armena, &
Terra Lemnia, an. 3jß.
Margaritarum Orientalium,
Lapidum Hyacinthorum,
Smaragdorum,
Saphyrorum, et
Rubinorum, et
Coralli Albi, et
Rubri, preparatorum,
Radicum Tormentilla,
Doronici, et
Dittami Albi,
Santali Citrini,
Rasura Unicornis, et
Eboris, an. 3ß.
Corticis Citri exterioris sicci, et
Seminis Acetosa, an. 3ijj.
Cinnamomi acutissimi 3j.
Caryophyllorum et
Croci, an. 3ß.
Folia Auri purissimi, No. xxv.*

The Hungarian Powder.

*R. Bole Armonack, &
Lemnian Earth, an. 3jß.
Eastern Pearls,
Stones, Jacinths,
Smaragds,
Saphyrs, and
Rubies,
White-Coral, &
Red prepar'd,
Roots of Tormetil,
Doronicum or Wolfs-bane, and
White Dittany,
Yellow Saunders,
Shavings of Unicorns-horn, and
Ivory, an. 3ß.
Dry outmost Citron-rind, and
Seed of Sorrel, an. 3ijj.
Biting Cinamon, 3j.
Cloves, and
Saffron, an. 3ß.
Leaves of purest Gold, No. xxv.*

Rasp the Unicorns-horn, and Ivory; beat the Pearls, Stones, as also the Coral, and Bole-Armonac in a Mortar, then grind them upon a Porphyrie-stone, till the Powder is not to be felt, moistning them now and then with Rose-water: make them into Trochiskes and let them dry in the shade. Beat the Unicorns-horn and Ivory, in a great Brazen-Mortar, with the Saunders and the Roots; then put in the Cinamon, dry Citron-Peel, and then the Cloves, and Sorrel-seed, and sift them through a silken sieve. Dry the Saffron and beat it apart; then having mix'd all the Powders with the Stones, Corals, Bole-Armonac, and Terra-sigillata, cut the Leaves of Gold in small bits. Mix an ounce and a half of this Powder with twelve ounces of fine Sugar dissolv'd in Rose-water, and you may boyl it up to the consistence of a solid Electuary, and make it into Tablets.

Unicorns-horn is reckon'd among the number of Medicaments, which being but a part of a mixt body, bears the Name of the whole; so that when the Unicorn is only set down, the Horn is only prescrib'd. This Creature is by the Greeks called *Μόδιος*, by the Latins, *Unicornis*. Writers vary very much about the description of this Animal. The most part make it in the body to resemble a Horse, and that he has one horn wreath'd like a Periwinkle-shell, sometimes longer, sometimes shorter, fix'd at the upper part of the fore-part of the Head; streight and pointed at the end. However, none

of them affirm that they have seen the Creature which they describe, nor do they say where he is bred. And therefore some question whether the Unicorn spoken of in the old Testament, were a Beast like that which our Naturalists have describ'd under the shape of a Horse, and whether it did not mean the Rhinoceros, by that which our Interpreters call a Unicorn, though the streight and twisted shape, and white colour which the Naturalists attribute to the Unicorn's-horn, is nothing agreeable to that of the Rhinoceros, which is not twisted, but crooked from the bottom, with the end turn'd upward; and besides is of a brown colour. But among all these contests of Natural Philosophers, my thoughts are that there is no such Unicorn in the World as they have describ'd; but that this white, hard, heavy, twisted horn, hollow within, and from one to two ells long, which we use in Physic, is the horn of a great Fish which is found in *Greenland*, which the Islanders call *Narwall*. This horn serves him as a defence against other Fish, and to kill the greater Whales, of which he is so fearless, that he will endeavour sometimes with a great impetuosity, to bore a hole in a great ship. The horns of this great Fish were formerly very rare, and the Fish that bore them very little known. But the frequent fishing in those Seas, have rendred them less rare in *England*, *Holland*, *Germany*, *Denmark*, and other places; and without seeking any farther, I have one by me at this present, longer and bigger then that in the Treasury of *St. Dennis*.

The rarity of this Horn was the reason that it was so much esteem'd in former times, and that they attributed such extraordinary vertues to it, as well in resisting poyson, as against the Small-pox, Measles, and all Epidemic Distempers. Infomuch, that we see in the Cabinets of great Persons long pieces of this horn adorn'd and enchac'd in Gold, as being still esteem'd a most precious rarity, and of an inexhaustible vertue, that imparts it self without wast to all Liquors wherein it is infus'd, like *Regulus* or Glasse of Antimony. But though the volatile salt with which this horn abounds, may produce the effects expected from it; yet the vertue once imparted to any Liquor by the horn is lost for ever to that part; as it happens to Harts-horn or Ivory, whose parts are much of the same nature with this Unicorn's-horn, which being boyl'd or infus'd loose all their vertue.

Doronicum is a Plant which many of the Ancients describ'd under the name of *Aconitum Pardalianches*, *Plantaginis folio*, the Leaves being like Plantain, but yellower. The Flowers are like those of the Corn-Marigold. The Root here prescrib'd is knotty and bearded, of a sweetish tast, and viscous substance. It kills Leopards, Wolves, and Dogs, and the most part of four-footed Beasts, though it is not hurtful to Man, but rather a great Antidote against Poysons.

This Powder is very much us'd in the North-parts, especially in *Germany*, where it is us'd in Malignant Fevers, and all Epidemic Distempers, and against all sorts of Poysons. It prevails wonderfully against the Small-pox, for it expels the malignity forth, and strength'ns the Noble-parts. They usually dissolve it in some Cordial-water, sweetn'd with Syrup of Gillow-flowers, Lemons or Granates, and take it fasting from half a scruple to half a dram. The Tablets tak'n one in a morning fasting, produce almost the same effect against Pestilential-Air.

**Pulvis Antipilepticus, D. D.
D'AQUIN.**

*R. Radicis Peonia maris, in eunte
vere, & decrefcente Luna col-
lecta, &
Seminis ejusdem,
Radicis Dittamni albi,
Visci Quercini,
Rasura Crani Hominis violenta morte
perempti,
Unicornis,
Eboris,
Ungula Alcis, an.*

℥j.

**An Antipileptic Powder by Monsieur
D'AQUIN.**

*R. Roots of Male-Piony gather'd at the
beginning of the Spring, in the de-
crease of the Moon, and
Seed of the same,
Roots of white-Dittany,
Mistletoe,
Shavings of a Man's Skull that dy'd a
violent death,
Of Unicorn's horn,
Of Ivory,
Hoof of an Elke, an.*

℥i.

<i>Margaritarum Orientalium,</i>		Oriental Pearls,	
<i>Lapidum Hyacinthinorum, &</i>		Jacinth-Stone, and	
<i>Coralli Rub. præparatorum an.</i>	3 ℔.	Red Coral prepar'd, an.	3 ℔.
<i>Seminis Ocymy Caryophyllati,</i>		Seeds of Clove-Basil,	
<i>Florum Tilie,</i>		Flowers of Tylet,	
<i>Betonica,</i>		Betony,	
<i>Lillii Convallium, an.</i>	3 ij.	Lilly Convally, an.	3 ij.
<i>Ambræ-Grisea,</i>	3 ℔.	Amber-grise,	3 ℔.
<i>Orientalis Moschi,</i>	Gr. vj.	Oriental Musk,	Gr. vj.
<i>Folia Auri purissimi,</i>	Nº. xv.	Leaves of finest Gold,	Nº. xv.

Procure the Ingredients true, take only the end, or tip of the Elk's-Horn, and rasp it, and prepare the Powder as before.

The Elke by the Latins call'd *Alce*, is a Creature that breeds in the Woods of the Northern Countries, particularly in *Norway*, as big as a large Horse, of a fallow colour, and somewhat shap'd like a Hart, but bigger and fuller-body'd. He has a Leg long and slender, and a foot cloven like the Hart; but his Horns are flat and broad, like those of a fallow-Deer's, and hairy toward the lower end. Some Natural Philosophers report this Beast to be so swift, that it were impossible to take them, did not they that hunt them observe the time, when they are troubled with the falling-sickness, which oft-times happens, and then take them before they have strength enough to put their left foot in their Ears. For if they give them time, they immediately recover, rise, and run for their lives. Which is the reason that the Elk's-Hoof is said to have power alone to cure the Epilepsie, being either tak'n inwardly, or hung about the Neck of the Patient.

Children born in the Southern Countries are more subject to Epilepsies, then those that are born in the Northern Climates; and more subject to Worms, which oft-times cause their Epilepsie. These Epileptic Powders are of great use, both for little and great. They prevail greatly against the Apoplexy, Palsie, and all Diseases proceeding from abundance or over-flowing of humours in the Brain. The same Dose as of other Cordial Powders is usually given in Cephalic Waters. They may be also mix'd with Opates, Tablets, or other Remedies.

Pulvis contra Rabiem.

<i>Rx. Foliorum Rutæ,</i>	
<i>Verbena,</i>	
<i>Salvia Minoris,</i>	
<i>Plantaginis,</i>	
<i>Polypodii,</i>	
<i>Absinthii Vulgaris,</i>	
<i>Mentha,</i>	
<i>Arthemisia,</i>	
<i>Melyssophylli,</i>	
<i>Betonica,</i>	
<i>Hyperici,</i>	
<i>Centauri Minoris, an.</i>	partes æ-
	quales. l.

A Powder against Dog-madness.

<i>Rx. Leaves of Rue,</i>	
<i>Vervain,</i>	
<i>Lesser Sage,</i>	
<i>Plantain,</i>	
<i>Polipody,</i>	
<i>Vulgar Wormwood,</i>	
<i>Mint,</i>	
<i>Mugwort,</i>	
<i>Balm,</i>	
<i>Betony,</i>	
<i>St. John's-wort,</i>	
<i>Lesser Centaury, an.</i>	equal
	parts.

Gather all these Herbs about the Full of the Moon in June, when every one of them flourishes in its greatest vertue; and in fair Weather, make them up into little bundles, bind them about with Paper, and hang them in the Air out of the Sun to dry. When they are quite dry, beat them in a large Brazen Mortar, and sift the Powder through a silken sieve.

This Powder was invented by Monsieur *Pirou*, and the Receipt is in a Treatise of the biting of a Mad-dog, writt'n by Monsieur *Palmerius*, a Physician of *Paris*, who affirms that he has often try'd it, and seen the wonderful effects of it, and that they that us'd it, had been cur'd of the *Fear of Water, so that they never had the Distemper; and that they that had it, had been freed from it by taking this Powder, provided they had

Hydrophobia, a Distemper occasion'd by the biting of a mad-dog.

not been bit in the Head, in the parts above the Teeth, or that they had not wash'd the part bitt'n with Water; in which cases he believes there is little hopes of cure.

Though the being plung'd into Sea-water, is accounted an infallible remedy against the biting of mad creatures, and that those who are near it, generally have recourse thereto: Yet this Powder deserves to be prepar'd for those that live at a distance from it. And I have had the opportunity formerly to prepare it exactly at Mr. Noel Simard's in Blois, where I was a witness of the great vent he had for this Powder, especially into the Countrey, and have heard the great applause that was given to it. He order'd it to be taken mix'd with half a dram of Powder of Vipers, in half a glass of good White-wine, in the Morning fasting, repeating the Dose for nine days one after another, and sometimes fifteen, for more security; and he assur'd me, that all that had tak'n it were cur'd. Monsieur *Palmarius* advises to augment the Dose for strong Persons; which I am perswaded may be done, there being no Ingredient in this powder, to hinder the augmentation of the Dose. There are some that advise the Patient, at the time of taking this powder, to lay bruise'd Parsley upon the place bitt'n, which is no bad counsel.

Pulvis pro Dentifricio.

<i>Rx. Radicis Ireos Florentia,</i>	
<i>Lapidis Pumicis,</i>	
<i>Cornu Cervi, usorum,</i>	
<i>Coralli Rubri preparati,</i>	
<i>Offis Interioris sepia,</i>	
<i>Cremoris Tartari tenu</i>	
<i>issime Pulveratorum, an.</i>	℥ j.
<i>Moschi Orientalis,</i>	
<i>Civet, an.</i>	℥℞.
<i>Oleorum stillatiorum ligni Rhodii,</i>	
<i>Caryophyllorum,</i>	
<i>Cinamomi, an.</i>	Gut. ij.

A Powder for a Dentifrice.

<i>Rx. Root of Florence-Orrice,</i>	
<i>Pumice-Stone,</i>	
<i>Harts-horn burnt,</i>	
<i>Red-Coral prepar'd,</i>	
<i>The inner-Bone of the Cuttle-fish,</i>	
<i>Creme of Tartar very finely pulveriz'd,</i>	℥ j.
<i>an.</i>	
<i>Oriental Musk,</i>	
<i>Civet, an.</i>	℥℞.
<i>Distill'd Oyls of Lignum Rhodium.</i>	
<i>Cloves,</i>	
<i>Cinamon,</i>	Drops ij.

Mix them all well, and keep the Powder for use.

You must be careful to reduce all the Ingredients into an impalpable powder, for fear of fretting the Gums. You may easily incorporate the Musk pulveriz'd, the Civet, and the distill'd Oyls, with the rest of the powders, without any fear of their being too clammy. No less easie will it be to reduce this powder into an Opiate by the mixture of equal parts of Syrup of Mulberries and Kermes, to give it the consistency of an Opiate.

I know there is no want of powders and Opiates to whit'n the Teeth. But not to slight private Receipts, nor such as are in the Dispensatories, I dare be confident that this is as good as any to cleanse and whit'n the Teeth, whether made use of in powder or reduc'd to an Opiate. For it not only cleanses and whitens the Teeth, but fast'ns them, and keeps them from Rotting. The Syrups must be mix'd with the Powders in a Marble-mortar.

Pulvis alius compendiosior ad idem.

<i>Rx. Lachrymarum elegantium Sanguinis</i>	
<i>Draconis, &</i>	
<i>Aluminis Romani ussi, subtilissime pul-</i>	
<i>verat. an.</i>	℥ ij.
<i>Moschi Orientalis,</i>	Gr. iij.

A more compendious Powder for the same.

<i>Rx. The Neat Tears of Dragon's</i>	
<i>Blood, and</i>	
<i>Roman Alum burnt, most finely pow-</i>	
<i>der'd, an.</i>	℥ ij.
<i>Oriental Musk,</i>	Gr. iij.

Mix them according to Art for use, or else reduce them into an Opiate with equal parts of the aforesaid Syrups mingled with the Powders.

This

This powder, though compos'd of fewer Ingredients, is not inferiour to the former, though not so cheap, because of the dearness of the Dragon's Blood in Tears. The richer sort, that value not expence, may add powder of Pearls, which will make the Opiate and powder never the worse.

The use of this powder is to rub the Teeth gently, Morning and Evening, or at any other time.

Pulvis Cephalicus Odoratus.

Rx. Radicis Ireos Florentia,	℥ viij.
Santali Citrini,	℥ iiij.
Florum Lavendula,	
Rosarum Rubrarum, &	
Summitat. Majorana, an.	℥ iiij.
Styracis,	
Benjonis, ana.	℥ ij.
Takamahacke Odorata,	
Florum Lillii Convallium, an.	℥ j.
Caryophyllorum,	℥ ij.
Laudani,	
Acori Veri, et	
Cypero Rotundi, an.	℥ j.

An Odoriferous Cephalic Powder.

Rx. Root of Florence-Orrice,	℥ viij.
Yellow-Saunders,	℥ iiij.
Flowers of Lavender,	
Red Roses, and	
Tops of Marjoram, an.	℥ iiij.
Storax,	
Benjamin, an.	℥ ij.
Odoriferous Takamahacka,	
Flowers of Lilly of the valleys, an.	℥ j.
Cloves,	℥ ij.
Laudanum,	
The true sweet smelling flag, or Acorus, and	
Round-rooted Cyperus, an.	℥ j.

Make them into a Powder thicker then ordinary; to which for the richer sort add of Musk, Civet, and Ambergrise, of each ten or twelve Grains.

This powder is usually apply'd, as well outwardly, as inwardly, which is the reason you need not beat them very small. The principal use of it is for Quilted caps; the vertue of it is to strength'n the Brain. It may be also sow'd up in little cushions, or bags, and worn upon the Stomach or Heart, carry'd in the pocket, laid upon the pillow in Bed, or put among cloths and linnen in Chests, for the same purpose.

Pulvis contra Vermes.

Rx. Seminis contra Vermes,	
Citri mundati,	
Genista,	
Portulaca,	
Caulium,	
Rhei Electi,	
Scordii,	
Centauri minori,	
Radicis Gentiana,	
Rasura Cornu cervini, an.	℥ j.

A Powder to kill Worms.

Rx. Wormseed,	
Seed of Citron cleans'd,	
Broom,	
Purslain,	
Coleworts,	
Choice Rhubarb,	
Water Germander,	
Lesser Centaury,	
Root of Gentian, &	
Shaving of Harts-horn, an.	℥ j.

Reduce them all into a very fine Powder to be kept for use; when you use it, add some few Grains of Mercurius Dulcis.

This powder contains a collection of all that Physic has of specific against the Worms. The Dose is from half a scruple to half a dram, and as far as a dram, for those that are of Age. It may be giv'n in Wine, in Scordium, or Water-Germander, Purslain, or Orange-flower-water, or in a roasted Apple, in some Syrup, or Conserve. It may be mix'd in Opiates and Potions. It may be giv'n with some grains of Mercurius Dulcis, but then care must be tak'n that the Mercury be well mix'd, and that it do not sink to the bottom of the Glass. If their be occasion, this Powder may be made purgative, by mixing with it some Grains of Rosin of Scamony or Jalap; which oft-times succeeds very well, the Worms being thereby carry'd away which the powder has kill'd. The three last days of the Moon are to be made choice of, if possible to give this, and all other Remedies against the Worms, as proving then most successful.

Pulvis

Pulvis Digestivus.

A Powder for Digestion.

℞. Pulveris Viperini, Seminis Faniculi dulcis, Anisi, & Coriandri, an.	3j.	℞. Powder of Vipers, Sweet Fennel-Seed, Seeds of Anise, and Coriander, an.	3j.
Dauci, & Ameos Creticorum, an.	3℞.	Wild-Carrot, and Bishops-weed of Candy, an.	3℞.
Corticis exterioris Curi sicci, Cinnamomi acutissimi, an.	3ij.	Outward rind of Citron dry'd, Sharp-biting Cinnamon, an.	3ij.
Caryophyllorum, Macis, an.	3j.	Cloves, Mace, an.	3j.

Make all these into powder to mixe with equal or double the weight in Sugar.

This Powder is not unpleasant, half a spoonful or a spoonful may be tak'n just after meals as long as necessity requires. It cherishes the Natural-heat, fortifies the Stomach, helps Concoction, expels wind, preserves the Appetite, and restores it to those that have lost it; corrects the noysom steams of the Stomach, and the ill-smells of the Mouth. The adding of two drams of Ambergrise to this Composition will increase all its vertues.

Pulvis contra Abortum.

A Powder against Abortion.

℞. Margaritarum Orientalium preparatarum, Rasura Unicornis, & Eboris, Succini albi, Coralli Rub. preparatorum, Mastiches, Seminis Plantaginis, Granorum Kermes, Santali Rubri, Terra Lemnia, & Radiciis Tormentilla, an.	3℞.	℞. Oriental-Pearls prepar'd, Shavings of Unicorns-horn, and Ivory, White Amber, Red-Corral prepar'd, Mastick, Seed of Plantain, Grains of Kermes, Red-Saunders, Seal'd-Earth, and Root of Tormentil, an.	3℞.
Macis, Caryophyllorum,	3j. 3j.	Mace, Cloves,	3j. 3j.

Make all these into a powder according to Art, mixing therewith six Leaves of pure fine Gold. When the Patient takes it, sweet'n it with an equal or double weight of Sugar.

This Powder has been giv'n to strength'n the Infant in the Womb, and to prevent Women from crying out before their time.

It is to be tak'n fasting, in an Egg, in Broth or some Syrup or astringent Confection, and the use of it may be continu'd as occasion requires. During which time it is necessary for Women that take it to keep their Bed. The dose is from half a Scruple to a Scruple, to those that are to continue the use of it. But half a dram or a whole dram may be giv'n to strong Women, if there be occasion, and when the danger is great. The same dose may be giv'n against weakneses, and want of Retention in the Stomach; as also in case of Diarrheas, Dysenteries, Lienteries, and other Diseases that proceed from weaknes of the Stomach. The Preparation is the same with the rest.

Pulvis ad difficilem Partum.

A Powder for women in Child-birth.

℞. Testiculorum Equi inclibano, ex Arte scicatorum, Cinnamomi acutissimi, Nucleorum Dactylorum, Boracis, Croci, & Foliorum Sabina siccorum, an.	3ij.	℞. The Stones of a Horse bak't in an Ov'n according to Art, Sharp-biting Cinnamon, Date-Kernels, Borax, Saffron, and Leaves of Savine dry'd, an.	3ij.
Trochiscorum de Myrrha,	3j.	Trochishes of Myrrh,	3j.

Make them into powder according to Art.

Put

Put the Horſe's Stones into a Glaz'd-earth'n-pot with a Cover well-luted on, ſet the Pot in a Baker's Ov'n when the Bread is tak'n out, and let it ſtand till the Stones are ſo drie that they may be powder'd. Theſe Teſticles thus dry'd may be kept in a Box cloſe ſhut, to be made uſe of as occaſion requires: for they may be left out as well as the Trochiſkes of Myrrh and the Savine, where the Perſons are too nice, or where there is not ſo much ſtrength requir'd in the Operation.

Pulvis Hyſtericus.

R. *Verrucarum ad genna Equorum enaſcentium Verno tempore avulſorum, aut ſponte procidentium,* ʒj.
Aſſe Fatida,
Cornu & Ungula Hirci, an. ʒj.

A Hyſteric Powder.

R. The Warts that grow within-side of a Horſes Leg, cut away or falling off of themſelves in the Spring-time, ʒj.
Aſſa-fetida,
Horn and Hoof of a Goat, an. ʒj.

Reduce all theſe into a groſſ powder. Caſt about a Scruple of this Powder upon live-coals, to ſit and receive the ſmoak into the parts affected, through a Tunnel.

This Powder is the moſt quick and certain Remedy that is againſt Suffocations of the Matrix.

Pulvis Jovialis Hyſtericus.

R. *Magiſterii Jovis Anglici, aut Bezoardici ejusdem,*
Matris Perlarum, &
Coralli Rubri præparat. an. ʒj.
Olei ſtillatitii Succini rectificati, ʒj.

Hyſteric Powder of Jupiter.

R. Magiſterie of *English-Jupiter*, or Bezoardic of the ſame,
Mother of Pearl, and
Red-Coral præpar'd, ʒj.
Diſtill'd Oyl of Amber rectify'd, ʒj.

Reduce theſe into powder, and mixe them for your uſe.

This Powder cannot be too much commended, for the great help it gives againſt the moſt violent and moſt deſperate ſuffocations of the Matrix, and for preventing its return. The doſe is a Scruple in Hyſteric-water, in the height of the Fit: and it may be tak'n three mornings after, to prevent its return.

Look for the Preparation of Magiſterie and Bezoar of Jupiter in the third part of this *Pharmacopœa*.

Pulvis Sperniolæ Crollii.

R. *Myrrha electæ,*
Thuris maſculi, an. ʒij.
Croci opt. ʒß.

Powder of Frogs-Tedders; by CROLLIUS.

R. Choice Myrrh,
Male-Frankincenſe, an. ʒij.
The beſt Saffron, ʒß.

Gather the Sperm of Frogs in the Month of March, three days before the new Moon, at what time the Sperm ſinks leaſt, and is moſt proper to be diſtill'd. Diſtill it in Balneo Mariæ through a Glaſs-Alembic: Or rather at the ſame time gather a greater quantity of Frogs-Sperm, and put it into a traſſparent Linnen-cloth; hang up the Bag and ſet a Veſſel for the liquor to drop into it. Put the Liquor into a Glaſs-bottle, and ſet it in the Sun to purify, pouring out from time to time the liquor that is clear, and changing the Bottles, and putting the Liquor ſtill in the Sun till it be all perfectly clear. Then powder the Myrrh, Frankincenſe and Saffron very fine, put the Powders mix'd together into a Plate of glaſs or white Earth, and having moiſten'd them with the Frog-water, and reduc'd them to a paſte, ſpread them in the Plate cover'd with a clean Paper and drie them in the ſhade: when the paſte is drie, moiſt'n it again with the ſame Liquor, and drie it again, and repeat the ſame Preparation twenty or thirty times over; and the more the better. At laſt reduce the maſs into a very fine powder, and add to it three drams of Camphire powder'd with ſome few drops of Spirit of Wine: Keep this Powder in a Glaſs-bottle very well ſtopp'd.

This

This Powder is an excellent Medicine to stop internal Hæmorrhagia's; for the coldness of the Frog-water coagulates the Blood. It also stays Vomiting and Spitting of Blood, and Bleeding at the Nose. It stops the progress of hot Gouts, and allwages their pain. It cools the Inflammation of Erisipela's, applying it soak'd in Vinegar upon the part. In two hours it mortifies a Whitlow, much more if it be steep'd in the Sperm-water. It stays the Fluxes of Blood in Women, being tak'n in Plantain-water. The Water of Frogs-Sperm alone allwages of the Gout, mix'd with a little Alum. The Dose of the Powder is from three to five Grains in proper Liquors.

Pulvis Dyfentericus.

Rx. Terra Lemnia,
Boli Armena,
Rosarum Rubrarum,
Balauftiorum,
Radicum Tormentilla, &
Bistorta,
Lacrymarum Sanguinis Draconum,
Coralli Rubri preparati,
Lapidis Hematites, an.
Seminum Portulacæ,
Plantaginis, &
Sophiæ Chirurgorum, &
Caryophyllorum, an.
Macis, an.

3j.

3℥.

3ij.

A Powder against the Dyfenterie.

Rx. Seal'd-Earth,
Bole-Ammoniac,
Red-Roses,
Pomegranate-Flowers,
Root of Tormentil, and
Snake-weed,
Tears of Dragon's blood,
Red-Corral prepar'd,
Blood-Stone, an.
Seeds of Purslane,
Plantain,
Flixe-wood,
Cloves, and
Mace, an.

3j.

3ij.

Reduce all these into powder according to Art.

This Powder is not only highly commended against the Dyfenterie, but against all defects of Retention in the Intestines and Stomach. The Dose is from one Scruple to one dram, or two when giv'n to strong Constitutions. It is giv'n in Wine, or in some astringent Water or Decoction. It may be also tak'n like a Bolus in some Syrup in an Egg, or some astringent Confection. For the Rich you may add six Grain of Amber-grise, and half a Grain or a Grain of Laudanum, if you desire more powerfully to stop the motion and acrimonie of the Humours: It may be tak'n oft'n, if occasion requires, but still fasting.

There are some that beat Rye-flower in a Mortar, with Juice of ripe Elder-berries, and make a Cake of it, which they drie in an Oven and reduce to powder, the use whereof is much the same with this Dyfenteric-powder.

Pulvis contra Hæmorrhagiam.

Rx. Lapidis Hematidis,
Nuclei Lapidis Aëthis,
Terra Vitrioli, post distillationem remanentis,
lota,
Boli Armena,
Thuris masculi,
Caudæ Equinæ,
Cerinodia,
Terra Lemnia,
Cornu Cervi nati, &
Gypsi, ana.

partes æquales.

Reduce all these into a powder for use.

A Powder against a violent Flux of Blood.

Rx. Blood-Stone,
Kernel of the Eagle-stone,
Earth of Vitriol that remains after distillation, wash'd,
Bole-Armoric,
Male-Frankincense,
Smooth-leav'd Horse-tail, or Joynted-Rushes,
Knot-grass,
Seal'd-Earth,
Hart's-Horn burnt,
Parget, ana.

equal parts.

This Powder is not to be tak'n inwardly. However it failes not to stop the blood of Wounds, Veins or Arteries apply'd alone, or incorporated with the white of an Egg or Vinegar, being bound upon the place with a Fillet. It stops Defluxions upon the Eyes, being

being steeped in the white of an Egg or Vinegar, and apply'd to the Temples. This Powder deserves to be prepar'd, and to be kept always in readines upon all unexpected occasions.

Pulvis Diatragacanthi Frigidi, Correctus.

R. Gummi Tragacanthi electi, ʒij.
 Arabici opt. ʒx.
 Glycyrrhiza, &
 Amyli, an. ʒß.
 Seminis Papaveris alb. ʒiij.
 Quat. frigid. maj. mund. an. ʒj.

The Corrected Powder of Cold-Diatragacanth.

R. Choice Gum-Tragacanth, ʒij.
 Arabick the best, ʒx.
 Liquorice, and
 Flower of Wheat, an. ʒß.
 Seed of white Poppy, ʒiij.
 Four greater cold cleans'd, an. ʒj.

Pulverize the Gums in a large Brass-mortar heated, as well as the Pestle, in such a quantity that you may be sure to have the Dose prescrib'd when they come to be sifted. Bruise one part of the Seeds with the Liquorice, another with the Amydon, another with the Gums, after they have been sifted: by which means you shall re-sift the whole Powder again with the Seeds.

We find in other Receipts of this Powder three ounces of Penidiate, more Cold-Seeds by half, as also Camphire, which are all left out. They that know that Sugar boyl'd in Pennets and mix'd in Powders, presently causes their putrefaction, and that it reduces the powder to a kind of paste, cannot think it amiss to leave it out: besides that its vertue is not considerable, and for that this Powder is never us'd but mix'd with Sugar, or with Compositions mix'd with Sugar. Nor can they disapprove the abatement of some part of the Cold-Seeds, to prevent it from rendring the Powder greasie and clammy. Especially considering that if you design to keep the powder, 'tis better not to put the Seeds in at all till you are just going to use it.

This Powder stops Defluxions from the Brain upon the Breast, thick'ns the thin humours, smoothes the roughness of the *Apera Arteria* and the Lungs, and is of great use in all Diseases of the Breast. You may make Tablets thereof by adding an ounce and a half or two ounces of this Powder to a pound of Sugar boyl'd to a solid Electuary. It is also mix'd in some sort in Looches to remove in some measure the sharpness of Laxatives. It is never giv'n alone, and therefore it is needless to limit the Dose, which must be regulated by that of the Compositions wherewith it is to be mix'd.

If you would make this Powder more detersive, and more effectual to unloosen flegm and facilitate expectoration, add to it the double of its weight of Orrice finely-powder'd; and by adding as much Sugar-candy powder'd as there is Gum-Tragacanth, you have the Simple-powder of Diaireos. Remember however that it is not good to put Sugar in Powders till you are ready to make use of them.

Pulvis Sternuratorius.

R. Foliorum Marjorana sictorum,
 Salvia,
 Betonica,
 Florum Lillii Convallium, an. ʒj.
 Raditum Ireos Florentia,
 Ellebori albi,
 Pyrethri,
 Seminis Nigella Romana, an. ʒij.
 Summitat. Pulegii Regalis, &
 Serpilli, an. ʒj.

A Sneezing-Powder.

R. Flowers of Marjoram dry'd,
 Sage,
 Betonie,
 Flowers of the Lilly of the Vally, an. ʒj.
 Roots of Florence-Orrice,
 White Ellebore,
 Pellitory of Spain,
 Seeds of Roman-Nigella, an. ʒij.
 Tops of Penny-royal, and
 Mother of Thyme, an. ʒj.

Make a Powder according to Art.

This Sneezing-powder produces good effects in Apoplexies, Epilepsies, Lethargies, and other Diseases of the Brain that proceed from a cold cause: For it op'ns the passages for the cold humours that besiege'd it, excites and enliv'ns the Natural-heat, and enables the parts to expel superfluities, that hinder'd them from performing their ordinary functions.

In extraordinary drowlines and sleepy-Lethargies, two drams of Euphorbium may be added to the Composition of this Powder. But not unless there be very great necessity, for fear the extraordinary operation of the Euphorbium cause so violent a defluxion of Rhume as will be difficult afterwards to stop.

Pulvis Cornachinus.

The Cornachine-Powder.

Rx. Scammonis purissimi sulphurati,	℥ij.	Rx. The purest Scammony sulphurated,	℥ij.
Antimonii Diaphoretici,	℥jss.	Diaphoretic-Antimony,	℥jss.
Cremoris Tartari,	℥ss.	Creme of Tartar,	℥ss.

Reduce them all into a fine powder for use.

This Powder was call'd *Cornachine*, by reason that *Cornachinus* a Physician of Pisa was the Inventor, and has made a great Commentary upon it. The wonderful effects of it have been the reason that some Persons have attempted to alter the Composition by adding or abating. For some, instead of preparing Scammonie with the vapour of Sulphur, imbibe it several times in Tincture of Roses sharpen'd with Spirit of Wine or Spirit of Sulphur, reduce it into a paste with Oyl of sweet Almonds, and dissolve the Creme of Tartar in a Decoction of Mechoacan, and chrySTALLIZE it to put it into this Powder. But not to find fault with their good Intentions, this I can be bold to say, That upon an infinite company of Tryals I have made, I dare affirm that this Powder prepar'd as here prescrib'd, failes not to answer full expectation. And therefore 'tis a vain thing to keep such a stir about the preparation of Scammonie; it being enough to spread it upon a piece of paper, and hold it over a little burning-Sulphur. Which done, do but prepare the Powder right and observe the Doses, and you need not fear the working.

Some call it *The Earl of Warwick's Powder*; others *Antimony-diagridiated*; others *Powder of Three*.

This Powder operates, quickly, safely and pleasingly. It gently purges superfluous Humours from the Bowels, and roots up the cause and matter of Agues, and many other tedious Diseases. The Dose is from half an scruple to half a dram, and sometimes to a whole dram. It is to be tak'n in a morning fasting, in white Wine, in Broth, or some Hepatic-decoction. It may also be tak'n in the Yolk of an Egg, in a little Syrup, or in some Confection.

Pulvis Nephriticus.

A Nephritic-powder.

Rx. Oculorum Cancrorum Fluvialium,		Rx. River-Crabs Eyes,	
Ossium petreorum Percarum, &		Stony-bones in the heads of Perches, and	
Asellorum minorum,		Lesser Whitings,	
Milipedarum siccarum,		Dry'd Chessops,	
Sanguinis Hirci preparati, &		Goats-blood prepar'd,	
Seminis Milii Solis, an.	℥j.	Seeds of Gromel, an.	℥j.

Grind the Crabs-Eyes and Fish-bones upon Porphyrie, moist'ning them with Turnip-water; observing the preparation of Precious-Stones. Take the Blood of a young Goat bred upon the Mountains, and there having fed upon Aromatic-herbs, drie the Blood in the Sun, spread upon Plates, till it be fit to be pulveriz'd with the Chessops and Gromel-seed. Then sifting all the Powders together, the powder is finish'd.

The Ingredients of this Powder are very diuretic: the principal vertue whereof consists in the volatile-salts wherewith they abound. And it is observable that there is nothing acid in the whole Composition. For the mixture of acids among fix'd or volatile Salts many times does but increase the Stone, by reason that by their proportional conjunction the Stones are form'd in the Body: so that there is nothing but the predominancy of the volatile or fix'd Salt above the acid, or of the acid above the fix'd or volatile Salts that oppose the growing of the Stone in the Body, or dissolve them when they are come to a Substance. The Dose of this Powder is from a scruple to half a dram. It is tak'n usually in white-Wine; and the use of it may be continu'd as occasion requires.

They

They that will be careful to prepare this Powder, need not care for that which goes in most Dispensatories under the Name of *Lithontripon*, or *Lithonripticon*, which is only a numerous collection of Medicaments much differing in quality, some of which are more proper to coagulate and shut up, then to dissolve and op'n.

CHAP. XX.

Of Opiates, Electuaries, and Confections.

THE Name of Opiate, by right, ought not to be giv'n but to soft Compositions, where *Opium* is an Ingredient. But many times Confections, Antidotes, and Electuaries are comprehended under that Name; so that there are some Compositions call'd Opiates, wherein there is no *Opium* at all; as well as the Names of Electuaries, Antidotes and Confections, to Compositions where *Opium* is mix'd. But not to examine the Liberties which the Writers have tak'n, I will only say, That Opiates, Confections, Antidotes and Electuaries, are internal Remedies variously compos'd of Pulps, Powders, Liquors, Sugar, and Honey, and most frequently reduc'd to a soft consistency to be put up close in Pots for use. Only solid Electuaries are to be excepted, of some of which I have spok'n in the Chapter of *Tablets*, having reserv'd the rest to be here inserted among Purgative Electuaries.

It is a difficult thing to prescribe any just proportion for the Pulps, Powders, Sugar, or Honey, which must compose these Opiates and Electuaries; or to give a general Rule for the quantity of Liquor necessary to suck up the vertue of divers Medicaments, boyl'd or infus'd therein; as for the boyling of the Sugar or Honey; in regard the quantity of the one or the other may be augmented or abated, according to the nature of the Ingredients, the purpose of the *Physician*, and the Palate and constitution of the Patient. For though the most usual proportion for Opiates, soft and solid Electuaries Laxative, be about three ounces of Powder to a pound of Sugar, or Honey, and an ounce and a half or two ounces of Powder for Confections, or solid Cordial-Electuaries; this proportion is not always to be observ'd. For regard is oft'n-times to be had to the price, scarcity or nature of the Ingredients of the Powder, or the quantity or thickness of the Pulps which are to be made use of in the stead of Sugar or Honey, to the palate and constitution of the Patient, to the hardness of the Composition, or the easiness or difficulty to give them their due consistence; or to the making the Composition more purgative or Laxative. Wherein there is a great exactness to be observ'd, especially in the Doses of Laxatives and Narcoticques. For therein you must observe to a grain the quantity of Powder which an ounce of Electuary can contain. To which purpose the *Apothecary* must be very careful justly to weigh every thing, and to make a true mixture, so that all the parts of the Composition may equally partake of the Powder and the Ingredients that compose it. Which general Rule may suffice to those who will take the pains to observe my Method in the particular Preparation of these sorts of Compositions, whereby they will find the reasons wherefore the proportions are not always to be the same.

**Theriaca Andromachi Se-
nioris.**

℞. *Trochiscorum Scilliticorum,*
Viperinorum,
Magmatis Hedychroi,
Piperis longi,
Opii Thebaici, an.
Rosarum Rubrarum,
Succi Glycyrrhizæ,
Seminis Buniadis,
Scordii,
Opobalsami,

*The Treacle of Andromachus
the Elder.*

Rx. Trochilhes of Squils,
Of Vipers,
The Dregs of *Hedychronum*,
Long-Pepper,
Theban-Opium, *an.*
Red-Roses,
Juice of Liquorice,
Seed of wild Navew,
Scordium,
Opobalsamum,

<i>Cinnamomi & Agarici, an.</i>	℥ iij.	Cinnamon and Agaric, an.	℥ iij.
<i>Costi,</i>		<i>Costus,</i>	
<i>Nardi Indica,</i>		<i>Indian-Spikenard,</i>	
<i>Dictamni Cretici,</i>		<i>Cretan-Dittany,</i>	
<i>Rhapontici,</i>		<i>Rhaponticum,</i>	
<i>Radici Pentaphylli,</i>		<i>Roots of Cinqfoyle,</i>	
<i>Zinziberis,</i>		<i>Ginger,</i>	
<i>Prassij Albi,</i>		<i>White-Hore-hound,</i>	
<i>Stoechadis Arabica,</i>		<i>Arabian-Cassidonic,</i>	
<i>Schoenanthi,</i>		<i>Sweet-Rush,</i>	
<i>Seminis Petroselinæ Macedonici,</i>		<i>Seed of Macedonian Stone-Parfly,</i>	
<i>Calamintha Montana,</i>		<i>Mountain Calamint,</i>	
<i>Cassia Ligna,</i>		<i>Cassia-Wood,</i>	
<i>Croci,</i>		<i>Saffron,</i>	
<i>Piperis Albi,</i>		<i>White Pepper,</i>	
<i>Nigri,</i>		<i>Black,</i>	
<i>Myrrha Trogloditidis,</i>		<i>Ethyopic-Myrrh,</i>	
<i>Thuris Masculi,</i>		<i>Male-Frankincense,</i>	
<i>Terebinthina Chia, an.</i>	℥ j β.	<i>Turpentine of Chia, an.</i>	℥ j β.
<i>Radicum Gentiana</i>		<i>Roots of Gentian,</i>	
<i>Acori veri,</i>		<i>True sweet-smelling Flag,</i>	
<i>Meu Athamantici,</i>		<i>Athamantic-Spignel,</i>	
<i>Valeriana majoris,</i>		<i>Bigger Valerian,</i>	
<i>Nardi Celtica,</i>		<i>Celtic-Spikenard,</i>	
<i>Amomi Racemosi,</i>		<i>Amomum with Clusters,</i>	
<i>Chamapityos,</i>		<i>Ground Pine,</i>	
<i>Coma Hyperici,</i>		<i>Hair of St. John's-wort,</i>	
<i>Seminis Ameos,</i>		<i>Seeds of Bilhops-weed,</i>	
<i>Thlaspeos,</i>		<i>Treacle-Mustard,</i>	
<i>Anisi,</i>		<i>Anise,</i>	
<i>Fœniculi,</i>		<i>Fennel,</i>	
<i>Seseleos Massiliensis,</i>		<i>Hartwort of Marseilles,</i>	
<i>Cardamomi minoris,</i>		<i>Lesser Cardamom,</i>	
<i>Malabathri,</i>		<i>Indian-Leaf,</i>	
<i>Coma Polii montani,</i>		<i>Hair of Mountain-Poley,</i>	
<i>Chamadryos,</i>		<i>Germander,</i>	
<i>Carpobalsami,</i>		<i>Berries of the Balsom-Tree,</i>	
<i>Succi Hypocistidos,</i>		<i>Juices of the Excrecence of Cistus,</i>	
<i>Acacia vera,</i>		<i>Of true Acacia,</i>	
<i>Gummi Arabici,</i>		<i>Gum-Arabick,</i>	
<i>Styracis Calamita,</i>		<i>Mountain-Calamint,</i>	
<i>Terra Lemnia,</i>		<i>Lemnian-Earth,</i>	
<i>Chalcitidis,</i>		<i>Chalcitis,</i>	
<i>Sagapari, an.</i>	℥ j.	<i>Sagapenum, an.</i>	℥ j.
<i>Radicum Aristolochie tenuis,</i>		<i>Roots of thin Birthwort,</i>	
<i>Coma Centaurii minoris,</i>		<i>Hair of the Lesser Centaurie,</i>	
<i>Seminis Dauci Cretici,</i>		<i>Seed of Cretan-Wild-Carrot,</i>	
<i>Opopanacis,</i>		<i>Opoponax,</i>	
<i>Galbani,</i>		<i>Galbanum,</i>	
<i>Bituminis Judaici,</i>		<i>Bitumen of Judea,</i>	
<i>Castorei, an.</i>	℥ β.	<i>Castoreum, an.</i>	℥ β.
<i>Mellis opt. despumati,</i>	℔ xxviij.	<i>The best clarify'd Honey,</i>	℔ xxviij.
<i>Vini Generosi,</i>	q. f.	<i>Strong Wine,</i>	q. f.

I have here inserted this Receipt of the Treacle of *Andromachus* the Father, not only in reverence to Antiquity; but because I am verily perswaded that if care be tak'n rightly to choose all the Ingredients that compound it, and to make a more methodical Preparation then the Ancients did, that the Medicine may prove of great vertue.

I have deliver'd my thoughts upon this particular Receipt in the Treatise of *Treacle*, which I have printed at *Paris* in the Year 1668. whither I might refer the Reader. But to spare him that pains, I will here epitomise in a few words the Observations which I there made upon this *Treacle*. Methinks that in the Preparation of Trochiskes of Squils he has

has done very well to imitate *Zwelfer*, to make use of the Root of white-Dittany pulveriz'd instead of the Vetches, in regard that all Physic acknowledges the Cordial-vertue of this Root, and that it is very proper to make the Squills fit for Trochiskes. Whereas the Vetches are of a very gross substance, have no Cordial-vertue, and are seldom us'd but in Cataplasmes; and never in any other internal Remedies then Trochiskes.

In the second place I am absolutely constrain'd to disallow of the ancient preparation of Trochiskes of Vipers, which was prescrib'd in that manner, because they had then no true knowledge of the Nature of Vipers, nor of their Venome, and because that the Havock which *Hannibal's* Vipers made in the Roman Ships, gave them occasion to think, very impertinently, that all the parts of the Vipers were venomous, and that it was impossible for them to have their Cordial and poyson-resisting vertue, without overcoming by some Preparation that ill imagin'd-Venome, and of which they were so afraid in their ridiculous preparation of the viperine salt. And this was that which oblig'd them to whip them, before they cut off their Heads, and their Tails, and not to make any use at all of their Hearts, and their Livers; as also to boyl the Trunks flea'd, and quite dis-embowel'd in Water with Salt and Dill, till the flesh came from the Bone; and to mix the same flesh, so boyl'd, with a sift part of Bisket-bread powder'd, to make Trochiskes: Not considering that the provocation of the Vipers by whipping could not but alter and deprave all the parts of their bodies, so far it was, from sending to the Head, as they pretended, a Venome which is not to be found in any part of the body, when the Viper is dead, nor when it is living neither, nor of which you can observe any ill effect, if she be not provok'd when she bites. Neither had they consider'd that the Heart and the Liver have as much vertue as the flesh,, or that the addition of Salt and Dill, are no way necessary; in regard the flesh of those Animals have no Venome; that they only serv'd to make an impression of heat and Acrimony; and that the Salt was opposite to their precepts of making choice of the breeding-place of the Viper, directing that no use should be made of those that bred upon the Seashore, by reason of the Salt things upon which they fed. Nor did they observe that they could not boyl Vipers in Water, till the flesh came from the bone, but that all the best part of their Juice and vertue must go into the Broth, as they might have seen by boyling their ordinary food. And lastly, they did not foresee that the Addition of a sift part of the Bisket-bread powder'd, void of any vertue, could not but be a burthen to the Viper's flesh, which was already depriv'd of its best parts; and that that quantity of Bread made up a moyety of the substance and weight of the Trochiskes when they were dry.

They who would not fall into these errors, and who in some measure to be conformable to *Andromachus*, would prepare Trochiskes, must not forget to make use of the Hearts and Livers of the Vipers, with their bodies dry'd in the shade, and reduc'd into fine powder. Let them then make a paste, somewhat solid, of this powder, with Malmsey, wherein they have dissolv'd never so little Gum-Arabic powder'd, and make it into flat, thin Trochiskes, which they must dry in the shade, and afterwards anoint with Balsom of *Peru*, as well for their preservation, as to give them a fragrancy.

If any object, that *Andromachus* never knew that the Vipers-bone was us'd in Trochiskes; I answer, that if he had perfectly well known the parts of which they are compos'd; or if he had understood as I do, that there is both a volatile salt and oyl in the bone, and that more plentiful then in the flesh, he would not have omitted the use of them, and never have crumm'd his Bread into Trochiskes. I am perswaded also, that if he were now alive; if he had been present at all the truths which I have discover'd, and had been convinc'd of the truth of the reasons which I have deliver'd in my Book of Experiences upon the Viper, he would infallibly have forsaken his own preparation, and have adher'd to mine, and caus'd them to change their opinion, who innocently lead him into a mistake.

In the third place, so far as most of the Ingredients that make up the composition of Trochiskes of *Hedychroum*, are also us'd in the composition of Treacle; and for that these drugs cannot be beaten apart, nor the Trochiskes be made and dried in the Air, without a great loss of their weight, as also of their vertue, considering also after all this, that the same Trochiskes are to be powder'd themselves among other Medicaments of the Treacle; It may not be amiss to let the making of Trochiskes alone, dispensing the proportion of Drugs requir'd for their composition, among the Ingredients prescrib'd for the composition of the Treacle; and so to powder the whole together, as things appointed for one and the same composition.

In the fourth place I cannot allow the opinion of the Ancients in the mixture of the Medicaments of the Treacle, whereby they direct the dissolving the Gums in Wine, to strain them through a cloth, and to boyl them afterwards to a consistency somewhat thick, to mix them afterwards in the composition; since there are several good reasons opposite to that Method. 1. Because there is no necessity to dissolve and strain the Gums which should be pure. 2. Because we cannot dissolve them in Wine, strain them, and boyl them to that consistency which they direct, without a great dissipation of the volatile parts whereof they plentifully consist, and wherein lyes their principal vertue. 3. Because by that means the spiritous part of the Wine dissipates, and the watry and Terrestrial part only remains. 4. Because that after the dissolution and straining of the Gums, though you may have augmented the weight, yet it is impossible regularly to observe the dose which the Author hath prescrib'd. And lastly, because that after you have put in the Gums very pure, by beating them among other Medicaments, the Powder becomes much better, by reason the viscos parts of the Gums stick to the light and dry parts of the other Ingredients of the Powder, which otherwise would be subject to dissipate, and by this means unless the Powder be too fatty, it beats better, and is made with less wast of its quantity and vertues.

As for the *Opium*, had it we in Tears that were pure, such as distills from the heads of the Poppy in the Country of *Thebes*, and such as *Andromachus* might have had in his time, it would be enough to beat it among other Ingredients, like the Gums in Tears. But by reason of the impurity of that which is brought to us, it is very proper to prepare it in extract, according to the method which I shall prescribe when I come to speak of extracts; and to dissolve these Extracts in a little Wine, like that of Liquorice, and the Juices of *Acacia*, or the undergrowth of *Cistus*, as also *Chalcitis*, or the Stone that tryes Brass, and to strain through a Cloth these Extracts or Juices dissolv'd, to separate and cast off the impurities, to the end they may be mingl'd afterwards in the whole mass of the Treacle.

In the fifth place, I see nothing that should oblige us to imitate the Ancients in the despumation of Honey, by adding Wine to it; as well to prevent the spiritous part from flying away in the Ebullitions necessary for the despumation, and to the end the grosser part of the Wine may not remain among the Honey; as for that it is impossible that the Honey should be kept so long upon the fire, till the forreign moisture be consum'd, without a remarkable dissipation of its Aromatic parts, which are not the least. And for as much as we never put into Treacle any Honey but what is perfectly fine, I can find nothing more proper then to allow it a small Ebullition without any Addition, and after it is taken off the fire and cool, to scum it, and strain it through a hair-sieve. In regard that little boyling is sufficient to put it into a condition to suck up about two pints of Wine, which are enough for the dissolution of the Juices prescrib'd for this quantity of Treacle, and to give all the Ingredients mix'd and united together, the consistency of an Opiate.

As for the *Opo-Balsamum*, or the Oyl of Nutmegs, which may be us'd in its stead; one part of the one or the other may be very properly mix'd with the dry Medicaments, when you make the powder without any fear that it should be too fatty. The surplussage must be incorporated with the Turpentine.

The Trochisks of Squills must be beaten among the rest of the Ingredients, which are to be pulveriz'd. The Saffron dry'd in a Stove, or by a moderate fire, may be beaten apart or with the rest of the Ingredients.

The Extracts being made and dissolv'd in wine, as also the Juices and the Powder being ready, the Turpentine must be melted with the *Opo-Balsamum*, or the Oyl of Nutmegs, in *Balneo Maria*, or over a very moderate fire. Fill three or four pints of Honey, scum'd and warm'd, into a large bason, mix therewith the Powder'd Saffron, if it were beaten apart; if not, mix therewith some part of the Powder, stirring the whole with a large woodd'n-Spatula; then add some pints of warm Honey; and after that put in some part of the dissolv'd Extracts and Juices, and continue adding successively, sometimes the Powder, sometimes the Honey, and sometimes the dissolv'd Juices and Extracts, till the mixture of all things be perfectly compleated. After that, mix the Turpentine, and the rest of the *Opo-Balsamum* or Oyl of Nutmegs incorporated: Stir the whole as long as you can, till the union and mixture of the whole be perfectly compleated.

When the composition is quite cold, put it up into an Earth'n-Vessel glaz'd within, a third part larger then to contain the quantity of the Treacle, that it may have sufficient room to swell, which the Treacle will do during Fermentation, which you may
hasten

hasten by putting the Vessel into a warm place. Stir the Treacle with a woodd'n Spatula twice a week, about a quarter of an hour together every time, for the two first months, and repeat the same stirring once a Week for the next four months; which make in all six months; the time which all Writers judge necessary for the Fermentation of this Treacle. By this means you shall not only make a perfect Union of the substances, but also of the virtues of all the Medicaments, and then you may safely make use of this Treacle.

The considerable quantity of *Opium* in this composition, is the reason that it sensibly shews its Anodyne, or pain-easing, thickning, soporiferous qualities, especially when it is new, though the force of the other Medicaments is not diminish'd, which serves as a curb to its operation. Treacle being compos'd of a great quantity of hot Medicaments, ought to be very much esteem'd for the cure of cold Diseases, and of all those where the Natural heat is feeble and languishing, especially among the rest, of Palfies, Epilepsies, Convulsions, and all cold Diseases of the Head. It is proper against all Weaknesses, and want of retention in the Stomach, and Intestines; against the Diarrhea, Dysentery, Lientery, *Morbus Cholera*, and all sort of Cholicks; against Agues, and particularly the Quartan; against the Worms, against all sorts of poyson, the Pestilence, Small Pox, the Measles, and all Epidemic Diseases; against the biting of mad-dogs, and all sorts of Venemous Animals; against want of sleep, and griping pains in Children; against Hysteric-passions, the Jaundies, and an infinite sort of other Diseases.

It is tak'n in Bolus, and you may drink a little Wine after it if you please, or else dissolve it in Wine, or in Cordial-water. The Dose of it for Children, is from one grain to three or four, and sometimes six: For grown people, from a scruple to a dram; and two drams for strong constitutions, and upon urgent occasions. It may be laid upon the Stomach or Heart, like an Emplaister, or Epitheme, as well to strengthen, as to resist any malignity, and to kill Worms. It is also to be laid upon Carbuncles, and Buboës Pestilential or Venereal. It is also to be mix'd with Spirit of Wine, and with Oyls and Oyntments, to be laid to the Chine of the Back, and upon the weaken'd parts. It is also laid to the wrists, and soles of the Feet in the fits of intermitting Agues, and particularly the Quartan. It is mingl'd in Opiates, and in divers portions. It is giv'n as an infallible remedy to hinder the too great effect of purgative Medicines, and all sorts of superpurgations.

But because the mixture of so many several Ingredients in one only composition, has for a long time displeas'd many Persons who are able to judge; and for that they have believ'd with good reason, that there might be a Treacle compos'd of fewer drugs, and more effectual then that of the Ancients. And for that I am well inform'd that several Physicians, but more especially Apothecaries, have earnestly wish'd that such a one might be invented and publish'd; Monsieur *D'Aquin* the King's chief Physician has been pleas'd to give me the Receipt of a Treacle order'd according to his own way, to impart on his behalf to publick view; wherein you shall find Medicaments, not only well-dos'd, and well-proportion'd, but also admirably well-chosen, and which will certainly work all the good effects which can be expected from an excellent Treacle, provided you take care to have sound and good Ingredients, and prepare them well, and observe the method which I shall set down.

Theriaca Reformat D. D. D'AQUIN.

Rx. *Truncorum, Cordum, & Hepatum Viperinorum succorum,* \S xxiv.
Trochiscorum Scilliticorum,
Extracti Opii Thebaici, an. \S xij.
Radicum Contra-yerve,
Viperina Virginiana,
Angelica,
Valeriana majoris,
Meu Athamantici,
Gentiana,
Aristolochia tenuis,
Costi,

A Reform'd Treacle of Monsieur D'AQUIN.

Rx. The Bodies, Hearts, and Livers of Vipers dry'd, \S xxiv.
Trochisks of Squills,
Extract of *Theban-Opium, an.* \S xij.
Roots of Spanish Counter-poyson,
Virginian Vipers-grass,
Angelica,
The greater Valerian,
Cretan Spignell,
Gentian,
Slender Birthwort,
Costus,

Nardi

<i>Nardi Indica,</i>	<i>Indian-Spikenard,</i>
<i>Nardi Celtica,</i>	<i>Celtic-Spikenard,</i>
<i>Cinnamomi,</i>	Cinamon,
<i>Olei Nucis Moscata per expressionem</i>	Oyl of Nutmegs prest,
<i>Extracti,</i>	
<i>Croci,</i>	Saffron,
<i>Dittamni Cretici,</i>	Cretan-Dittany,
<i>Folii Indi,</i>	Indian-Leaf,
<i>Scordii,</i>	Water-Germander,
<i>Calamintha Montana,</i>	Mountain-Calamint,
<i>Folii Montani lutei,</i>	Yellow Mountain-Poley,
<i>Chamaepityos,</i>	Grand Pine,
<i>Comarum Centaurii minoris &</i>	Hair of the Lesser Centaury, and
<i>Hyperici,</i>	St. John's-wort,
<i>Florum Stoechadis Arabica,</i>	Flowers of Arabian Cassidony,
<i>Granorum Amomi Racemosi, &</i>	Berries of Amomum, and
<i>Cardamomi minoris,</i>	Lesser Cardamoms,
<i>Seminis Petrofelini Macedonici,</i>	Macedonian Stone-Parsley,
<i>Ameos,</i>	Bishops-weed,
<i>Seseli Massiliensis,</i>	Seseli of Massilia,
<i>Myrrha Troglodytidis, an.</i>	<i>Ethiopian Myrrh, an.</i>
<i>Resina Stryacis electa purissima,</i>	The purest Rosin of Storax,
<i>Opopanax,</i>	Opopanax,
<i>Sagapeni,</i>	Sagapen,
<i>Castorei, an.</i>	Castoreum, an.
<i>Extracti Mellaginei Granorum Juniperi,</i>	Mellaginous Extract of Juniper-berries,
<i>℥ lxxij ℥.</i>	℥ lxxij ℥.
<i>Vini Malvatici,</i>	Malmsey-wine,
<i>℥ j ℥.</i>	℥ j ℥.

There is no need of preparing Trochiskes of Vipers for this Treacle, it being enough to hang up the Bodies, Hearts, and Livers of the Vipers, to dry in the op'n Air out of the Sun, and to take the weight prescrib'd. The Trochiskes of Squills are prepar'd with the Powder of the Root of White-Dittany, as I shall shew in the Chapter of Trochiskes. Draw the Extract of *Opium* according to the method which I shall give in the Chapter of Extracts in the Third Part of this *Pharmacopæa*, and reduce it into an indifferent solid consistence.

The Root of *Contra-yerva*, or *Spanish-Counter-poyson*, grows in *Charcis* a Province of *Peru*. It is smaller then that of *Orrice*, reddish without, white within, knotty and fibrous. The smell is like that of Figg-leaves. The word which signifies in *Spanish*, *Counter-poyson*, comes from the *Spanish Terva*, by which name the *Spaniards* call white-Hellebore, with the Juice whereof the *Spanish* Huntsmen are wont to poyson their Arrows in the Countrey where the *Contra-yerva* grows. The tast of the Root is Aromatic, accompany'd with a kind of Acrimony.

The *Virginian* Vipers-grass, is a kind of *Contra-yerva*, which grows in that part of *Virginy* possess'd by the *Spaniards* in the Northern Tract of *America*; it is very Aromatic, and much esteem'd in *England* against Poysons, and all sorts of Venomes. For which reason it is added to the Root of *Contra-yerva* of *Peru*, in the Countess of *Kent's* Powder, to which these two Roots do give its principal vertue.

What I have already said of the Roots of *Angelica*, *Spignel* and *Gentian*, speaking of *Theriackal Vinegar*, needs no repetition.

I cannot change my opinion as to what I have already said of slender Birthwort, in my Discourse upon Treacle. And say moreover, that for this, or the Treacle of *Andromachus*, you are to use no other Birthwort, then that which by Writers is call'd *Pistolochia*, *Polyrrhizon*, or the bushy-rooted Birthwort, because it is of a slenderer substance then all the rest, and in particular more abounding in vertue, then the *Clematidis*, or *Spanish* climbing Birthwort, which *Matthiolum*, and some others, his followers take for the slender Birthwort.

For it is not enough, that *Dioscorides*, *Matthiolum*, and *Theophrastus*, knew but three sorts of Birthwort, the long, the round, and the *Clematidis*: That the *Clematidis* has a slenderer Root then any of the three; That *Matthiolum* believ'd that it was to be made use of in the Treacle before the long or the round, and that it has in some places been

put

put into the Treacle instead of the slender Birthwort; it ought also to have been inquir'd whether there were no other sort of Birthwort in *Europe*; whether the *Clematitis*, had any other more evident marks of slenderness, then all the other Birthworts; and whether it surpass'd them in virtues, that we might certainly know it to be that to which *Andromachus* has giv'n the name of slender? Then it might have been seen that there are several other sorts of Birthwort, besides the three of *Dioscorides*, *Matthiolum*, and *Theophrastus*, and the *Clematitis* which *Matthiolum*, and some others take for the slender Birthwort: that instead of being slenderer then the rest, the stalks thereof are thicker and higher; the Leaves, Flowers and Fruits, larger and bigger, and the Roots much longer then those of all the other sorts of Birthwort, and in particular much bigger then those of *Pistolochia* or *Polyrrhizon*, or bushy-rooted Birthwort, of which all the parts are much more slender, then that of *Clematitis*, and all the other sorts. It might have been observ'd that the bushy-rooted Birthwort, which I have made choice of, has a taste, smell, and colour, both External and Internal, much more like to those of the long and round Birthwort, then to that of the *Clematitis*; which on the contrary differs much from the rest, especially in taste and smell. As for the virtues, though that *Matthiolum* believ'd that it was to be made use of in the Treacle, for the slender Birthwort, in regard the *Clematitis* was the most slender that he knew, you shall find nothing in better Authors to support his opinion; On the contrary, you shall find, that the *Clematitis* is inferiour to the bushy-rooted Birthwort in vertue.

We shall find in *Dioscorides*, upon whom *Matthiolum* grounds his writings, that after he has extoll'd the virtues of the long and round Birthwort, at last, says he, *Clematitis* is thought to have the same effects, but it is inferiour in vertue. But he does not say, as his Commentator does, that it is to be put into the Treacle. We shall find that *Ruellius*, after he had extoll'd the virtues of the Birthworts, and above all, those of the bushy-rooted, concludes in these words: That which is call'd *Clematitis* is thought to work the same effects, but more slowly. We may find in *Daleschamp*, that *Clematitis* is proper for the same uses that all the other Birthworts are, but that it is inferiour in vertue. And the same Authour citing *Galen*, where he speaks of Birthworts, saith, that the *Clematitis* is much more odoriferous, for which reason it is us'd in fragrant Oyntments; but that in Physic the Operation is less effectual then that of the rest. And the same Authour, quoting *Aegineia*, puts *Clematitis* among the Medicaments that evacuate Choler, which is no effect expected from the virtues that Treacle ought to have. You shall meet with *Clusius* also citing the same *Galen* to the disadvantage of *Clematitis*; as also *Bauhinus*, speaking by the mouth of *Dioscorides*, and saying, *Clematitis* is thought to do the same, but it is inferiour to the forementioned in vertue. And the same *Bauhinus* urging *Galen*, thus says; That which is call'd *Clematitis* is more fragrant, therefore it is us'd in Oyntments, but in Physic it is much weaker. You may find in *Lobel*, the same Citations of *Dioscorides* and *Galen*, to the decrying of the *Clematitis*. In particular he speaks thus,

Polyrrhiza Aristolochia, &c. The Roots of bushy-rooted Birthwort, not mention'd by *Dioscorides*, and unknown to his Commentator, *Rondeletius* brought into use, utterly neglected through ignorance of the Plant, and yet to be prefer'd before the other two, as well for its pleasing Acrimony, as for its more effectual operation in Physic, and therefore by *Andromachus* and *Galen*, recommended as more fit for Treacle; For he that observes the tast and savour shall find the *Clematitis*, much more ineffectual, which the Latins took to be the slender Birthwort, mention'd by the ancient Writers of Treacle. Afterwards you shall find him thus discouraging. Not less known, nor less common is the *Clematitis*, which grows of it self in the cold Fields and Vineyards in the other parts of France, in all Italy, Germany, and Flanders. It grows like a Vine-Branch, about a Cubit long, with a yellow Flower, the stalk about a Cubit in length, the Fruit oblong, about the bigness of a small Egg, with a broad seed within, the Root small and fragrant. This is of less vertue then the rest, and less in use, unless it be with the omniscient *Apollo*, and *Matthiolum*, that follow the Rabble of vulgar Apothecaries; who when they never saw the long and bushy-rooted, and were perswaded that there was no Plant wanting in Italy, were easily perswaded that the *Clematitis* was the true long Birthwort.

I need not here recite what *Dodoneus* has written of the climbing the bushy-rooted Birthwort, as being conformable to *Bauhinus*, *Daleschamp*, and others. Nor is it necessary to search for any better or more certain Authorities, to maintain what I have said for the bushy-rooted Birthwort. And therefore I will say no more, but that I had done ill not to have chosen it for the slender Birthwort of *Andromachus*, and for that which is to be us'd in Treacle, or had I taken it for the Plant to be us'd in the absence of the other. For which use they that chuse the *Clematitis*, honour it beyond its deserts;

all its parts being very far from Tenuity or slenderness, and therefore both in that, and in its vertues inferior to the *Pistotochia*, or bushy-rooted Birthwort.

Having gather'd this Birthwort in the beginning of the Spring, when it begins to sprout up, wash it and cleanse it from all its superfluities, and hang it up in an Airy place out of the Sun, to dry, and so to be afterwards mix'd with the other Ingredients.

As for *Costus*, I believe the three sorts which Authours have describ'd, may be reduc'd into one. And I follow *Clusius* in this, who says, *I am of this opinion, that there is but one sort of Costus*. And *Bontius*, a Dutch Physician, affirms the same thing after *Garcias ab Horto*. For though *Dioscorides*, and several others after him, have describ'd three sorts of *Costus*, the *Arabian*, *Indian*, and *Syrian*, and that they have strain'd themselves to give several shapes to these sorts of *Costus*, and beyond whatever *Dioscorides* has written, upon whom they all depend. Nevertheless, it is certain, that in *Europe* we see but one sort of *Costus*, which is generally receiv'd and approv'd by all, and which has, as it were in contraction, all the marks which *Dioscorides* has giv'n to all the three sorts, except some kind of sweetness, which length of time may have in some measure dissipated. For the taste of a Plant fresh-gather'd, is different from that which has been kept a-long time.

The *Costus* which is brought to us, is a good thick Root, of the bigness of a Man's fist, and sometimes twice as big, and might well be a foot long, if it were brought to us intire; the outside is of the colour of Ashes, the inside is white, enclining to the colour of Box. It is very fragrant, and at first taste is somewhat sweet, but afterwards it tastes bitter with a kind of Acrimony, but altogether Aromatic. *Costus* is rather light then ponderous, not being of a very compact substance. If we might take *Costus* for the kind of a shrub resembling Elder, as some would have it to be, we should then choose that sort of *Costus* which is call'd *Corticofus*, or *Barky*; which is a Bark white all over, very fragrant, and of an Aromatic taste, having the resemblance, but not the taste nor colour of Cinamon. This *Barky-Costus* seems to me not to differ much from the true *Costus*, either in vertue or good qualities.

Few Persons in *France* can aver that they have seen in the *Indies* the true Plant of Spikenard, which grows in great abundance in *Java*. *Bontius* says, that it grows upon the Mountains about fourteen leagues from *Batavia*, and that there is no going thither for fear of Tygers and Thieves, which are very numerous in those parts. I can safely say, that I myself have gather'd the *False Nard* upon the Mountain *Genevre*, upon the Borders of the *Dauphinat*, next to *Piemont*, and found the Ears, or Spikes, crouded together in a round cluster, underneath and next the superficies of the Earth, having little Roots very slender underneath; the whole very much resembling the figure of the true *Indian-Nard*, describ'd by *Adamskius* and others. The Ears or Spikes of the *False Nard* are somewhat bigger then those of the *Indian-Nard*, the hairy fibers scatter'd, and standing like bristles, and of a brown colour. They have almost no smell or taste; in the middle is a woody part that serves all along for a foundation to the hairy part. The Ears of the true *Indian-Nard* are somewhat less, having no woody part; the fibers are of a yellow colour enclining to purple: it begins from the little Root, and being knit together, forms a kind of a Spike, or Ear, which keeps a-long time, very like to that of *Cyperus*; the taste is very Aromatic, with some bitterness and acrimony, drying the Tongue and leaving behind it a kind of pleasing scent. The little Roots of Spikenard under the Ear, are to be thrown away as of no use. The fairest are to be chosen which must be gently shak'n in the hand to shake off the dust; and the inner part must be drawn out at the upper part of the Ear or Spike, which is usually more pale then all the rest, which must be thrown away: the Spike thus cleans'd is to be made use of. You may also cut them before you go about to bruise them, according to the opinion of some. But it is better to let cutting alone, since the hair may be bruis'd, and reduc'd to Powder without it, among the other Ingredients.

Cinamon well-chosen, as I have already given directions, needs no other Preparation.

The prest Oyl of Nutmegs, abounds so much in vertues, that we need not look after Natural Balsoms, for the most part sophisticated to put into Treacles, or any other internal compositions. I reserve the Preparation thereof, to the Chapter of Oyls drawn by the Press.

It is not without reason that I have said, That the most part of Balsoms which are sold for natural, are sophisticated: For we may be sure that the real Balm of *Judra* would be excessively dear, could we be assur'd that it were right; and that if we had

not

not great cause to believe, that that which is brought to us is no other then a suppos'd Balsom. As for the Balsom of *Pern*, though it is probable, that we may have it right from thence, because it is more plentiful and cheap; yet it is very liable to be counterfeited, and I could give the Description of one that has been tak'n for true by many *Apothecaries* and *Druggists* of *France*, who having found there the principal markes which the right one ought to have, and finding it to be at a high rate, have purchas'd considerable quantities of it: though I make no question but the cunningest of them all was deceiv'd. But I rather choose to omit this Description, then to give any one the least occasion to cheat. I give this advice to those that may or have been couz'n-ed, and who because they may have this counterfeit Balsom at four Livres the pound, prefer it in the ancient Treacle before the pres't Oyl of Nutmegs that costs three or four times as much.

Cretan-Dittany is a Plant which has a great number of stalks covered with a white woolly down, and very much tufted; the leaves are also round and thick, the flowers are purplish, and very like those of Violets, but of a more clear Violet-colour, and appear among the leaves at the tops of the stalks; the seed lies in the cup of the flower, when the flower is gone. You must endeavour to get fresh Dittany, gather'd when it was in flower, if it may be had; otherwise you must be content with the leaves well cleans'd.

The *Indian leaf*, call'd *Malabathrum*, is not a leaf without a root growing upon the water, like the Sea-Intel, as some Writers would have it to be; but it is the leaf of a great Tree growing in the Country of *Cambaya*, and in several other parts of the *Indies*. The ends of the boughs which are often fixed to the leaves apparently demonstrate, that it is a Tree which bears them. This leaf is very large, and resembles that of the Citron-Tree; of a pale green colour, having three strings separated by equal intervals, running along from one end to the other of the leaf. The upper part is smooth and shining, the under part rough; the taste of it is Aromatic, participating of Nard, Mace, Cloves and Cinamon. It differs very much in smell, taste, bigness, and the disposal of the ribs from the Laurel-leaf, for which some have tak'n it without any ground at all. The leaves which are whole and green are always the best.

The true Amomum is well known, and is brought to us in bunches, about the length of three or four Thumbs: This bunch has a rib that serves for support to the husks, which are round, and as big as stones of Grapes of the colour of white Ashes, smooth, and thicker cluster'd then usually Grapes are, being fix'd against their Basis like the Grains of Pepper. The bunch is in part cover'd with six leaves like the Pomgranate-leaf, of which three are longer and grow farther out then the other three, which inter-divide them. The shells are full of a purplish-seed, almost square, and very like in all things to the seeds of Cardamoms: These grains, or seeds, join'd together make a round Figure, separated nevertheless by very thin skins, but so close thrust together, that the entire little Globe seems to be compos'd but of three parts, though the seeds may be easily separated by pressing them between your Fingers: the husks and the skins must be thrown away, there being nothing to be made use of but the purplish well-grown seeds, rejecting those that are black and wither'd. The taste of these grains, is tart, piquant, and very Aromatic, and remains a good while in the Mouth.

The smaller Cardamom here prescrib'd, is the most excellent of all; The seeds of it are four-square, in little triangular husks, of the colour of white Ashes, like the husks of Amomum; the seeds are also of the same colour and taste, and divided into three parts by very thin skins. They are to be chosen and cleans'd like those of Amomum.

The seed of *Macedonian Parsley* is of a pale green colour, small, somewhat long-pointed and flat, of a sharp and very Aromatic taste and of a pleasing smell. They must be very well cleans'd from dirt and other superfluities.

The seed of *Ameos*, or Bishop's-weed, is between that of common Parsley and Smal-lage; it is almost round, and very like to that of Sand-dust, of which it bears the Name. We have two sorts brought us, the taste of which is very Aromatic and bitter. But the *Ameos* of *Creet*, the taste and smell whereof participates of those of Time and Basil, is to be prefer'd before the other. This seed is to be cleans'd like the former.

The seed of *Sesili*, or Hart-wort of *Marseilles*, is a little smaller then that of wild-Fennel, and very like it in Figure. It is of a pale green colour, of a sharp Aromatic

and somewhat bitter taste. It must be chosen new and well-grown, and must be well cleans'd.

Myrrh is a Rosiny-Gum, which being new is of a yellow green colour, enclining to red, fatty, fragrant, sharp, biting and very bitter; being full of whitish spots when it is broken, like the spots upon a Man's Nail. It must be chosen very pure, and as transparent as may be; and the bigger Tears are to be prefer'd before the lesser.

We may be certain that the Tree which produces Storax, yields abundance of Tears. But I cannot believe that the Storax which is brought to us, or which they pretend to bring hither out of the East is the right Storax. The high price which it has been sold for those many years, has encourag'd the wickedness of those Cheats; and the tryal I have made thereof has so far convinc'd me as not to trust them any more.

It is not with Galbanum, nor salt Ammoniac that these Tears are to be counterfeited, as some have thought in regard the strong and noisome scent of the one and the other, could never compose that sweet and pleasing scent which they are careful to give to these Tears which are vended for Storax. But most certainly they are counterfeited with some white Tears of Benjamin, or with some Rosiny Gum without scent, or which is easily out-scented by the Storax. To which purpose I have thought fit to publish what I have experimented, which is, that having Storax in Tears, whose smell, taste, colour, and figure, were such as are requir'd in true Storax, I undertook to soften one Tear in my hand intending to incorporate it afterwards with other drugs of a resembling substance. I was astonish'd when I found all the good scent of the Storax to be lost in my hand; and that same Tear was not fit to impart any thing of good scent or virtue to an Aromatic Balsom which I was making. Thereupon, trusting neither to the Storax made up like bowls, which is increas'd with liquid Storax, nor to that other Storax sold in Shops, light, and very full of Saw-duft, I chose a Storax of a delicious scent, full of Grains, or little Tears, and free from dirt, out of which I extracted the Gum in the following manner.

Having put eight ounces of this Storax into a Skillet, with twelve ounces of good White-wine, I stirr'd the whole gently with a Spatula, and when I found that the Storax was sufficiently dissolv'd, I presently pour'd it out hot as it was, into a close-woven strong linnen-bag, and having bound it hard just above the ingredients, I prest it between two hot plates, and drew out two ounces of pure Gum, as fair as it was fragrant, and which is in every thing superiour to the sorts of Storax in tears which are brought to us. I made use of this Gum in my Balsom with great satisfaction, and use it upon several other occasions for Medicines, both Internal and External. They that meet with such Storax as I have describ'd, may take my advice, and purifie it by this means.

Opopanax is a Gum dissolvable in any watry Liquors, which flows after incision from one of the Fennel-like Plants, call'd, All-heal, or *Panax Heracleum*. It comes out of the Plant liquid and white, but by degrees it becomes white and of a Gold-colour without-side. Opopanax is to be chosen new, in pure drops, fat, and white, at least within, of a sharp bitter taste, and a strong scent. Sagapenum call'd also Serapinum, because it smells somewhat like the Pine, is a Gum dissolvable in moist Liquors like Opopanax. It proceeds also from one of the *Ferula's*, or Fennel-like Plants, of a sharp and somewhat bitter taste, of a strong and unpleasant smell, white without and within, while it is new, but afterwards it grows somewhat reddish without; and in time it becomes of a dark colour, both within and without, like other Gums, especially those that are of a watry substance. The purest and the newest drops are to be made choice of.

I cannot be beaten out of that rational opinion that the Bags or Cods, which the Castors carry in that part, where we see the Testicles of all other four-footed Animals, contain the true Castoreum that is to be put into this Treacle, and into all other Medicines where Castoreum is prescrib'd. Nor is it to be wonder'd that while I acknowledge the principal matter contain'd in the Bags for the right Castoreum, I have tak'n the whole for the real Testicles, as well in regard of the situation of those bags, as for the Apellation of *Fibri Testes*, or Castor-stones, which many Writers have given them. Considering also, that when I had discover'd the real Testicles, serving to Generation, their smallness, and their privation of scent, caus'd me to neglect and throw them away, as altogether useless in Physic; especially when upon examination of the Cods that contain the Castoreum, I observ'd their figure, both external and internal, accompany'd with several Fibers and Membranes, as also a substance very conformable to that of the Testicles of other Animals, which may be pulveriz'd when they are dry. The unctu-

ous part contain'd in a little distinct Vesicle in the same principal Tunicle that contains the Castoreum, not being capable to divert us from that thought, especially taking the Castor for a kind of amphibious creature, that may be term'd a Monster, as being one half like a Land-Animal, the other like a Fish. I am perswaded also that they who should see these Bags situated as they are in the body of the living Animal, as also out of the body, and dry'd, as they are sold to us, would absolutely take them for the real Testicles, unless they had examin'd things so strictly as the Gentlemen of the Academy-Royal, in their Anatomy of a Castor some years since, of which they have set forth a very exact description. But it is not the name of Testicles improperly given to these Purfes, that hinders them from the true Castoreum, or from being put into the Treacle, and indeed as being to be preferr'd far before the true Testicles.

As for the choice of Castoreum, and the place where those Animals are tak'n that carry it, though most Writers prefer those of *Pontus*, I make no question, but that the Castors which are taken up and down upon the Rivers of *France*, *Swedeland*, *Poland*, *Germany*, *Canada*, and over all the *West-Indies*, may be every jot as good. For I could never observe any difference but only between the true Castoreum, and the counterfeit, which is not interdivided within with Fibers and Membranes, and is nothing but a mixture of certain stinking Gums, mingl'd with Powder of Castoreum, and the unctuous Juice which is found in the common, and principal Vesicles that enclose the Castoreum, which together make a tenacious mass, very much unlike the fleshy-substance of the true Castoreum, which may be easily reduc'd to Powder, and is only to be us'd in Treacle.

If *France* did not produce Saffron endow'd with all the good qualities that can be expected, we should be oblig'd to Forraign Countries. But because we have very good, with which we also furnish *Germany*, *Swedeland*, *Poland*, and other parts, we should do ill not to make use of it. Of all the Saffron that grows in *France*, that which grows in those Provinces that lye most to the South, seems to be preferr'd before any other, because of the Nature of the soyl. For all Aromatic Plants, that grow in such places, are to be preferr'd before those that grow toward the North. The yellow part upon which the hair of the Saffron grows, is to be clipp'd off with the point of a pair of Scissors, and that part of the Hair is to be made use of which is of a scarlet-colour.

Celtic-Spike, call'd by the Latins *Spica Cehica*, grows upon the *Pyrenean-Mountains*, and upon the Mountains of *Tyrol* in *Germany*. It is a small Plant but very Aromatic, which is brought to us in little Sheaves or Bundles, having no appearance of any Spike, but in its Root. I suppose also that the name of Spike was giv'n to it, because it smells very like to Spikenard. The vertue of the whole Plant is concenter'd in the Root. The Leaves, the Flowers, the strings, and all the other superfluities are to be thrown away. The Roots also must be spread in a moist place, and must be moisten'd themselves to make them less brittle, before you make them clean. Otherwise when you go about to pick out the superfluities with the point of a Pen-knife, the Root would break if it were too dry.

As for the Preparation of the Extract of Juniper-berries, I refer you to the Chapter of Extracts in the third Part of this *Pharmacopœa*.

As for the mixture of all the ingredients for this Treacle, you must observe the same method, as for that of the Ancients; only I will say this for the Extract of Juniper-berries, that it does not only perform the same thing as the despumated Honey, for the mixture and preservation of all the ingredients, but it very much augments the vertue of the Treacle, which is nothing inferiour to that of the Ancients, and works in all respects much more powerfully; there being in the whole composition, not one ingredient but what is chosen with Judgement. The Dose and use of the ancient Treacle may serve as a rule for this.

Theriaca Diatesaron.

℞. Radicum Gentiana,
Aristolochia rotunda,
Baccarum Lauri,
Myrrha Eleſta, an. ʒ ij.
Mellis opt. despumati, &
Extracti Baccarum Juniperi, an. ℥ j.

Make an Electuary according to Art.

Diatesaron Treacle.

℞. Roots of Gentian,
Round Birthwort,
Laurel-berries,
Choice Myrrh, an. ʒ ij.
The best clarify'd Honey, and
Extract of Juniper-berries, an. ℥ j.

This

This Treacle was invented particularly for the Poor. It is call'd *Diatessaron*, because it consists but of four Ingredients that make up the Powder; which being mix'd with the Honey and Extract, make a very Sovereign remedy against Poyson.

The Preparation of this Treacle is very easie; for there is no more to do, but to mix the Powder of the four ingredients, with the Honey and the Extract, and then to put up the composition for your occasions.

This Treacle is not to be despis'd; it is good against all contagious Diseases, biting of venomous Beasts, the Apoplexy, Convulsions, and all cold Diseases of the Head, as also against Worms, to fortifie the Stomach, and open all Obstructions of the Bowels. The Dose is the same with the other Treacles.

Mithridatium Damocratis.

Rx. Myrra Troglodytidis,
Crocī,
Agarici,
Zinziberis,
Cinnamomi,
Nardi Indici,
Thuris Masculi,
Seminis Thlaspeos, an.
Sesileos Massiliensis,
Opobalsami,
Schenanthi,
Stachadis Arabica,
Costi,
Galbani,
Terebinthine Chia,
Piperis longi,
Castorei,
Succi Hypocystidis,
Storacis Calamita,
Opopanacis,
Folii Indi,
Cassia Lignea,
Polii Montani,
Piperis Albi,
Scordii,
Seminis Dauci Cretici,
Trochiscorum Cyphaos,
Bdellii, an.
Nardi Celtici,
Gummi Arabici,
Petroselinii Macedonici,
Opii Thebaici,
Cardamomi minoris,
Seminis Feniculi,
Radicis Gentiane,
Rosarum Rubrarum,
Dittamni Cretici, an.
Seminis Anisi,
Radicis Acori Veri,
Ari,
Valeriana majoris,
Sagapeni, an.
Men Athamantici,
Acacia Vera,
Ventris Scinci,
Seminis Hyperici, an.
Mellis Opt. despumat.
Vini Opt.

3 ij β.

3 j β.

3 x.

3 vj.

3 v.

℥ xix.

q. β.

Damocrates's Mithridate.

Rx. Ethiopian Myrrh,
Saffron,
Agaric,
Ginger,
Cinamon,
Indian-Spikenard,
Male-Frankincense,
Treacle Mustard-seed, an.
Hartwort of Marseilles,
Opobalsamum,
Camels-Hair,
Arabian Cassidony,
Costus,
Galbanum,
Chio-Turpentine,
Long-Pepper,
Castoreum,
The juice of the Undergrowth of Cytus,
Calamite Storax,
Opopanax.
Indian-Leaf,
Cassia-Wood,
Mountain-Poley.
White-Pepper,
Water-Germander,
Seed of Cretan wild-Carrot,
Trochiskes de Cyphi,
Bdellium, an.
Celtic-Nard,
Arabian Gum,
Macedonian Stone-Parley,
Theban-Opium,
Lesser Cardamom,
Fennel-seed,
Root of Gentian,
Red-Roses,
Cretan Dittany, an.
Anniseed,
Roots of true Acorns,
Wake-Robin,
The bigger Valerian,
Sagapen, an.
Athamantic Spignel,
True Acacia,
The belly of the Land Crocodile,
Seed of St. John's-wort, an.
The best clarify'd Honey,
The best Wine,

3 ij β.

3 ij β.

3 x.

3 vi.

3 v.

℥ xix.

q β.

I

I have inferted this Receipt for Mithridate, that I might not be complained of for omitting so famous a Composition. And though there be as much reason for the reformation of this Mithridate, as for that of the ancient Treacle; yet I thought it not necessary for the latter, since the reformation of the Treacle may serve for both, at least may serve as a good assistance to ingenuity.

A smaller quantity of Opium is here prescrib'd than for the Mithridate, and the Trochiskes of Vipers and Squills are quite left out.

Agaric is an Excrecence growing like a Mushroom, upon the Trunks or upon the bigger boughs of old Trees. There are two sorts, the Male and the Female. The Male is yellowish, heavy and compact, and more fit for Dyers than for Physick. That which is call'd the Female is most sought after. The best is found upon the Larch-tree, by the Latines call'd *Laryx*. The Ancients talk'd of Agaric growing in a Province of *Sarmaria* call'd *Agaria*, either from the Agaric, or else from the River *Agarus* that waters it. We at this time make use of that Agaric which grows upon the high Mountains of the *Dauphinate*, which are the ancient *Alpes*, or upon the Mountains of *Trent*; though we are not to despise that which comes from the East, or from any other place, provided it have the principal Marks which are to be sought for in Agaric, which are whiteness, lightness, cleanness, bigness, friability, penetrating scent, and extraordinary bitterness. Agaric is one of those Medicines that purge with violence and by attraction. So that it may be as well left out of the Mithridate as out of the Treacle; by reason of the opposition of its vertue to the Cordial, and Alexipharmacal Quality of the other Medicines.

Ginger is very well known; and though there are reckoned two sorts, Male and Female, yet Physic makes no difference, but only chuses the newest and the best grown, white within, which is brought from the *East-Indies*; that which comes out of *America* not being so much in esteem, principally because of its dark colour.

Male Incense call'd *Olibanum* is well known in Shops; it is a Gum which must be chosen in large Tears; white, pure and weighty, of a sharp and bitter taste, and of a penetrating smell. I know not why they should give it the name of Male, but only to distinguish the large and fair Tears from the common ones.

Writers describe *Opobalsamum* to be a thick whitish transparent juice or Liquor, in smell resembling Turpentine, but much more pleasing. It ought to distil forth after incision made in the Dog-days, of the Branches of a Shrub call'd *Balsamum*, the wood whereof is call'd *Christo-Balsamum*, the Branches whereof are brought to us in streight pieces, but very brittle, and unequally knotted. The Bark of the wood is somewhat reddish without, but greenish within, and the wood underneath is whitish and full of pith. This wood when it is new, being broken, yields a smell very like to that of *Opobalsamum*, the taste whereof is bitter and somewhat tart. The most esteemed Plant of Balsom grows in *Judea*, and *Arabia Felix*, and by cultivation in the Gardens of the Grand Signior in *Egypt*. It also grows in *Pern*, but inferiour in goodness and beauty. There is no *Opobalsamum* properly of *Judea*, which is not very dry; so that we cannot observe the essential Marks which Authors ascribe to it; which are, that if you put a drop into water or Milk, it seems as if it would presently dissolve in those Liquors, but it afterwards swims a-top, and you may gather it together with a straw or a Needle; and that if you pour a drop upon a piece of Cloth, you may take it off again without leaving the least spot or stain. The same Writers represent *Opobalsamum* to us, to be so penetrating, that the force and sharpness of the smell is hard to be endured; so that not meeting now-a-days with any of these qualities, we have great reason to question whether we have the right or no, and to be sorry that a Liquor so famous should be so little known to us. Which confirms in my opinion, that it is better to make use of press'd Oyl of Nutmegs both in Treacle and Mithridate, and in other Medicines where *Opobalsamum* is prescrib'd, than to make use of impos'd *Opobalsamum* which we have so much reason to question. So much the rather, because that press'd Oyl of Nutmegs is of a nature between Gummy and Oily, and pressed from a Fruit very aromatical and full of vertue; and for that its taste, smell, and penetration render it worthy of so good a place.

The word *Schoenanthos* is Greek, and signifies the Flower of a Reed, which is the best part of that Plant; for though the taste and smell of that Reed assure us, that it is not void of vertue, yet we must believe that the Flower has something more of considerable in it, for beauty, taste, and smell being that of all Flowers, which longest preserves all its good qualities, notwithstanding its smallness and thinness, so that having been kept several years, it still fills the Nostrils with a strong scent, and the mouth
with

with a sharp and Aromatic tast. The odoriferous Reed that bears this Flower grows in *Nabatea* a Province of *Arabia*, where it is so plentiful, that they litter their Camels and other Cattel with it. The hight of this Reed is about a foot, the Root small slender and full of knots. The Plant is tufted and compos'd of several cluster'd rows, of a pale green colour, intermix'd with some long streight leaves, and pointed like the Reeds, near to the points whereof are to be found those little Flowers, which are of a whitish colour enclining to Purple, dispos'd in double ranks.

The Flowers of the Odoriferous Reed are not to be made use of till they are very well cleans'd; which I do thus. After I have sifted through a coarse Sieve the dust which is usually found among these Flowers, I spread them upon a sheet of Paper, then I lay upon them a new coarse cloth well scatter'd with hair, somewhat longer and broader then my hand. Then taking up the piece of cloth you shall find many Flowers sticking to the cloth, which must be pickt off and kept a-part: And this must be done till you have as many flowers as you stand in need of.

Galbanum, is a Gum dissolvable in watry Liquors, like *Opoponax* and *Sagapenum*; it also flows after incision from one of the *Ferula's* or *Fennel-leav'd-Plants*, call'd *Fennel-Gyant*. The biggest Tears are to be chosen, pure, white, thick, of a sharp and bitter taste, and a strong and unpleasing smell.

Of all the Turpentine that flow from several Trees, and which we acknowledge for liquid Rosins, that which flows from the Turpentine-Tree is esteem'd the best; It ought to be transparent, of a whitish colour enclining to green, of an indifferent strong smell, and not displeasing. The best Turpentine is brought from the Island of *Chio*; it is usually not so thin as those of *Venice*, and other places.

The long Pepper consists of many small grains, as it were set together in Rows, and not op'n and separate; of an Ash-colour, when it is ripe. The Leaves are like those of the long Pepper, but of a paler green, and thinner; longer-pointed, and with a shorter foot-stalk. The taste of long-Pepper, is like that of black-Pepper, but more moderate in heat and dryness; it ought to be new, and well-grown, and the foot-stalk ought to be cast away.

The Juice of the undergrowth of *Cistus*, is drawn from a small excrescence, rising from the Male and Female *Cistus*, *Ledum*, or sweet *Cistus*, with upright stalks cover'd thick with Leaves, scarce a foot high; that with Sea-Purslain Leaves is of a yellowish colour. The roots are as big as two or three thumbs, sometimes a finger, sometimes the whole hand in length, somewhat bigger at the top then bottom, and representing a Pomegranate-flower at the top. They grow and flourish toward *May*. They are tender and Juicy, and yield a black acid Juice, which is depurated by being boyl'd over a small fire, in an Earth'n-glaz'd Vessel, to the consistence of an Extract somewhat solid, call'd Juice of *Hypocistis*.

The Tree call'd *Cassia Lignea*, is almost like to that which bears the Cinamon, and they grow together in the Island of *Ceylon*. These two Barks, though born by different Trees, are boyl'd and dry'd after the same manner, and their taste and scent is almost alike; their colour, shape, and thickness, differ almost in nothing, but the *Cassia Lignea* is of a fatter, more mucilaginous substance, which dissolves by chewing in the mouth, whereas the Woody-part of Cinamon will not dissolve, though you chew it never so long.

The seed of *Cretan-Daucus*, or Wild-Carrots, is to be preferr'd before any other; it is long like that of Cummin-seed, but not so big: the colour is white with a Velvet superficies, the taste and smell are pleasing enough; however it is somewhat sharp, and hot, but very Aromatic.

There are two sorts of Mountain-Poley, one whose flowers, and all the upper part of the Leaves and Stalks is of a Gold-colour, the other white. Both the Plants are cover'd with a tufted Cotton, especially the yellow; whose taste and smell are very Aromatic, so that they fill the mouth at the same time with a mixture of several Aromatics. The yellow-Poley is to be preferr'd before the other.

The true *Carpobalsamum* is extremely scarce, or to say more truly, it is not to be had now-a-days, according to those marks which Authours give of it. For they describe it to be fix'd to the Plant with a cup; to be large, weighty, picquant and sharp in taste, cover'd with a small Membrane of a deep yellow-colour, inclining to red; lin'd within, with other Membranes thicker then that without, and which contains within a yellow Honey-like substance, with a pleasing scent like to that of *Opobalsamum*. But the Grains that we meet with in shops, have none of these marks: and though time might wear away some of these marks, yet it could not annihilate them all.

Which

Which makes me to doubt of their Legitimacy, and to substitute Cubebs in their place.

Cubebs, for colour, form and bigness, are very like black Pepper-corns, except that they have a little footstake which fastens them to a rib like the bunch of a Grape: Their taste is biting and glowing, very bitter, but very Aromatic: They grow in the Island of Java upon Shrubs that climb upon other Trees like Ivy. Some Authors have written, that the Inhabitants boyl them before they will suffer them to be transported, fearing they might be sown, and grow in some other place: But the little vent they have for them, and the small price they are at, utterly destroys the vanity of such a conjecture. They are good to heat and fortifie the Stomach, to open obstructions of the Spleen, to correct the cold intemperature of the Matrix, and to excite Venery.

Trochiskes de Cyphi, you shall find in the Chapter of *Trochiskes*.

Bdellium comes from *Bactriana*, where it is produc'd by a black Tree as big as a white Olive-tree, the leaves whereof are like to those of an Oak. *Bdellium* is a Gum, to which Authors have ascrib'd for marks to be clear and yellow, like Wax or strong Glue, to be bitter, fat, and to smell like *Unguis Odoratus*, when it is burnt.

The true *Acorus* is brought us from *Lithuania*; it is a Root that crawls upon the Earth, and is nourish'd by certain strings that belong to it: It is very knotty, about a finger in bigness; of a white inclining to flesh-colour, of a biting and bitter taste, of a thin light substance, of a strong scent, but very pleasing.

The true *Acacia* is the thick juice of the fruit of a great Thorn-tree that grows in *Egypt*, the Flowre whereof is white, and the fruit contain'd in Husks like Lupins. This juice is of a high colour, and beautiful red, of a compact substance, but which will easily break by striking upon it, when it is very dry: It is brought to us in Bowls done up in thin Bladders; it must be clear, and shine within when it is broken. The taste should be styptic, stinging, and very Aromatic.

The *Sea-Scinkes*, are little Animals like to Lizards, or rather like to little Crocodiles, by which name they are call'd; they live part in the Water, part upon the Land: They goupon four legs very short, and very small; their Snouts are more pointed then a Lizards, and their Tails are thin and short: They are beautiful to look upon, being cover'd with scales dispos'd in a wonderful order of Silver-colour, sometimes dark'nd to a Gold-colour, especially upon the Backs. They are never so big as Crocodiles, and they breed in *Egypt* upon the Red Sea; in *Lybia*, and in the *Indies*: The reins or the belly of these Scinkes are chosen for Mithridate, though the other parts have their vertues also.

For the mixture of this Treacle, it is the same with that of Ancient Treacle.

As to the Vertues of Mithridate, they are almost the same with those of Treacle, though somewhat inferior in all things, particularly against the bitings of Serpents, to which the flesh of Vipers is principally necessary; as also to allwage pain, and procure rest: but then it wants that quantity of *Opium* which is in the Treacle.

Confectio Alkermes Regia.

Rx. *Succi Pomorum redolentium*,
Aqua Rosarum fragrantissima, an. ℥i℥.
Serici crudi mundati & minut. incisi, ℥j.
Omnia Matrario bene clauso excepta horis
24 in Balneo Mariæ digerantur: Te-
pide deinde sericum torculari exprima-
matur; Liquor vero cum sacchari opt.
℥ij. ad Electuarii solidi consistentiam,
coquatur. Ab igne tunc removeatur E-
lectuarium & in illo succi recentis Ker-
mesini spissioris ℥j. dissolvatur & post-
modum promisceantur.

Margaritarum Oriental. preparat.

Santalī Citrini,

Cinnamoni Acutissimi, an. ʒj.

Ambra Grisea cum olei Cinnamomi Stillatiss

Gut. iij. pulverata, ʒ℥.

Royal Confection Alkermes.

Rx. Juice of fragrant Apples,
 The most fragrant Rose-water, an. ℥i℥.
 Raw Silk cleans'd and cut small, ℥j.
 Put them together into a Matrass well
 stop't, and digest them for twenty
 four hours in *Balneo Mariæ*: Then
 squeeze the warm Silk in a Press,
 and boil the liquor to the consistence
 of a solid Electuary with ℥ij. of the
 best Sugar: Then take the Electuary
 from the fire, and dissolve therein ℥j.
 of the new thicker juice of *Kermes*:
 after that mix therewith,
 Oriental Pearls prepar'd,
 Yellow Saunders,
 Biting Cinamon, an. ʒj.
 Ambergrise pulveriz'd with three drops
 of distill'd Oyl of Cinamon, ʒ℥.
 Lapidis

<i>Lapidis Lazuli usti, loti, & levigati</i>	3 ij.	<i>Lapis Lazuli</i> burnt, wash'd, and made smooth,	3 ij.
<i>Foliorum Auri,</i>	3 j.	Leaves of Gold,	3 j.
<i>Moschi Orientalis,</i>	3 lb.	Oriental Musk,	3 lb.

Many Writers have attributed great vertue to raw Silk. But though the use thereof had been at all times unknown in Physic, my judgement is, that it is too fragrant, that it has too much beauty, that it affords too many conveniencies to humane Life, that there are too many wonders in the first Original, progress, labour and metamorphoses of the worm which produces it, to be despis'd. And so much the rather, for that we know that all the parts of Animals, as also of their Excrements and Productions, are impregnated with a volatile Salt; and because I am so far convinc'd of the extraordinary vertues of Volatile Salts, that I may be bold to call it the right hand of all Physic. For which reason, and for the continual use which several great and famous men have made of raw Silks in their Medicines, I say that it was not without sufficient grounds prescrib'd among those other ingredients that make up this Composition.

That is call'd Raw Silk, which was never boil'd, but is still as it were in the grain, out of which the worm has been but newly taken, four or five days after that little Artist has finish'd its work. For at that time this Silk is very pure, provided you take away the outward wrapping and the inward tunicle of the grain, which is next the worm. This Silk thus cleans'd will not fail to impart its vertues to this Confection, or where-ever else it shall be prescrib'd.

For the methodical preparation of this Confection, you must pulverize apart the yellow Saunders and the Cinnamon very finely, and prepare the Pearls upon Porphyrie. You must heat red-hot and three times quench the *Lapis Lazuli* in Rose-water, where it must also soak for 24 hours, then prepare it upon Porphyrie like the Pearls. Powder the Ambergrise and the Musk together, mixing therewith three drops of Oyl of Cinnamon, which will hasten the pulverization, and prevent them from sticking to the Mortar; and when they are pulveriz'd, mix them with the other Powders. In the mean time having taken away all the superfluities of the raw Silk, put it into a Matrafs, and pour upon it the juice of Apples clarifi'd, and the Rose-water prescrib'd, and having stopp'd the Matrafs keep it four and twenty hours in *Balneo Maria* lukewarm. Then having strain'd and strongly press'd out the Silk, dissolve in the Liquor two pound of fine Sugar, and boil them together in a glaz'd earthen Pipkin, over a moderate fire, to the consistence of a solid Electuary, when you have taken it off the fire mingle with it a Pint of the press'd grains of Kermes, new and perfectly ripe. After which add thereto by degrees the Powders, and last of all the Leaves of Gold, and having put up the Confection in a Gally-Pot close stopp'd, keep it for your use.

You might melt the Ambergreese in a small part of the hot Syrup, with which it is to be incorporated, but it could not be well done, without some dissipation of the sweet odour, as also of the vertue of the Ambergreese, besides that the beauty of the colour of the Confection would be quite spoil'd. And therefore the best Preparation of Ambergreese upon this occasion is to powder it. You will find in this Receipt the weight of the Pearls, yellow Saunders, Cinnamon and Ambergreese augmented beyond what you shall find in the most part of other Receipts: But besides that these ingredients are not to be spar'd in a Composition so highly esteem'd, the increasing of the quantity of the Powders serves to render the Confection much better then it is wont to be.

As for the leaves of Gold, I should have agreed with them, who affirm that these leaves afford no considerable vertue to this Confection, nor to any other Compositions, because the Gold cannot communicate its vertue without having been first digested in the Stomach, and there chang'd its nature; and I should have thought that this Gold in leaf had rather been for ornament then for any vertue, had not the following Relation caus'd me to alter my opinion.

Monsieur *Peter Conder*, Apothecary at *Milbau* in *Rouvergue*, a very honest man, and very skilful and knowing in his Art, and my very good Friend assur'd me, that some years since he was sent for to a Lady of very high Quality, aged about threescore years, whose Face was extreamly full of red Pimples and Pustulas, and who was troubl'd with a stinking breath; and that by the advice of several famous Physicians, he gave her for her ordinary Diet, Pullets that had been shut up in a Chamber eight days, and were fed with a Paste made of Vipers, boil'd in a little water with Wheat in an earthen glaz'd Pot cover'd,

cover'd, continuing to feed the Pullets in the same manner, till they were good to eat : That the Lady having dyeted six months upon these Pullets, he dyeted her with Capons for the other six months, which besides the Paste of Vipers with which they were cramm'd, were also fed with Leaves of Gold mix'd among their Food ; and that the Lady having continu'd the use of those Capons, at the end of the last six months found her self perfectly cur'd of both her Distempers, insomuch that having liv'd from that time to the Age of fourscore years, her body being entomb'd and tak'n up again four years after she was buried, was found to be as entire, as when she was first laid in her Grave.

In the mean time Monsieur Conder, resolving to search in the Capons-dung, for about eight marks in Leaves of Gold, which they had swallow'd from time to time, carefully caus'd the Dung to be swept together, and calcin'd the Excrements, and made use of Quicksilver to make an Amalgama of the Gold if there were any, and after he had exhal'd the Quicksilver Amalgama'd with the Gold, and had afterwards forc'd it to fusion with the addition of a little Borax, he recover'd about two marks in Gold, which had the weight, but the colour was much paler then that of ordinary Gold.

Upon which my judgement is this, that this great diminution of weight and change of colour, could not happen to the Gold, but that some of its parts were chang'd into the proper substance of the Capons, and that this could not happen, till the Gold was dissolv'd in the Capons Stomach, by the operation of their volatile Salt, joyn'd with the acid Liquor which is naturally in that part, doing almost the same thing which a Regal-Water would have done. So that we cannot but think that Leaves of Gold in Compositions cannot but be very commendable and useful; for besides the beauty and the conceit which they may put into the Head of the Patient, they may add their vertue to that of the other Ingredients.

They that live far from the places where Grains of Kermes grow, may make use of a trusty Friend, to send them the Syrup of Kermes prepar'd after my Method; with which they may at any time make the Confection. You may also make a Confection without Amber or Musk, chiefly for Women that are afraid of sweet scents.

This Confection is without question one of the best Cordials that ever Galenic Physick invented. For it repairs and recreates the Vital and Animal Spirits; it ceases Palpitations of the Heart, and Swoounding-fits. It fortifies the Brain and all the Noble Parts very much; It is an Enemy to putrefaction, re-establishes the languishing and decay'd strength, drives away melancholy and sadness, and restores and preserves both body and mind in a good estate. It is taken upon the point of a Knife or dissolv'd in Wine, or in Broth, or in any Cordial or Cephalick Liquor. It is also mingl'd among Opiates or Electuaries both soft and solid. The usual Dose is from one Scruple to one Drachm. It is also mixed in Epithemes prescrib'd for the Heart and Liver.

Confectio de Hyacintho,

℞. Lapidum Hyacinthorum,	
Coralli Rubri,	
Bolis Armenae, &	
Terra Sigillata, an.	3 ij 3 ij.
Granorum Kermes,	
Foliorum Dittami Cretici,	
Radici Tormentillae,	
Seminis Citri Mundati,	
Croci,	
Myrrha Troglodydis,	
Rosarum Rubrarum,	
Santalorum omnium,	
Offis e corde Cervi,	
Rasura Cornu Cervi, &	
Eboris,	
Seminis Acetose,	
Portulacae, an.	3 v 3 j.
Lapidum Saphyrorum,	
Smaragdorum,	

Confection of Jacinths.

℞. Jacinth-Stones,	
Red-Corral,	
Bole-Armoniac, and	
Seal'd Earth, an.	3 ij 3 ij.
Grains of Kermes,	
Leaves of Cretan-Dittany,	
Root of Tormentil,	
Seed of Citron cleans'd,	
Saffron,	
Ethiopian-Myrrh,	
Red-Roses,	
All the Saunders,	
The Bone of a Deers heart,	
Shavings of Harts-horn, and	
Ivory,	
Seed of Sorrel, and	
Purslain, an.	3 v 3 j.
Saphyrs,	
Smaragds,	

<i>Topaziorum,</i>		Topazes,	
<i>Margaritarum Oriental.</i>		Eastern-Pearls,	
<i>Serici Crudi,</i>		Raw-Silk,	
<i>Foliorum Auri,</i>		Leaves of Gold, and	
<i>Argenti, an.</i>	℥ viij.	Silver, an.	℥ viij.
<i>Moschi Orientalis,</i>		Oriental-Musk,	
<i>Ambra Grisea, an.</i>	Gr. xx.	Amber-grise, an.	Gr. xx.
<i>Syrupi Florum Tunica,</i>	℥ viij 3 viij.	Syrup of Clove-gillow-flowers,	℥ vi 3 vii.

Make a Confection according to Art.

The great vent which several Cities have for this Confection, Alkermes, Treacle, and some other compositions of the same Nature, has not been sufficient to satisfy the Avarice of certain Jumbler, who not content to foist into this composition several Ingredients altogether unuseful, in the place of the true ones, which are usually dear, make use of a Syrup extraordinarily boyl'd, to one entire pound of which they add an ounce, or at most an ounce and a half of Powder: for which they by their good wills would only take the Bole, if the Saffron-colour, the taste of Myrrh, and the beauty of the Gold-Leaves, were not requisite for them to conceal their cheat. So that we need not wonder that they sell this confection and several others so cheap, and yet they make more profit far, then they who compound the Medicines right. They never seek after the true fragments of Jacinths or other precious Stones, the Oriental Pearls, nor the Bone in the Deer's-Heart; but being perfect cheats sell for considerable rates, that which is good for nothing but to fill their own Pockets.

But to make it as it should be, make choice of the true fragments of Jacinths, Saphyrs, Emraulds, Topazes, and Oriental Pearls, which you shall find among the Lapidaries, together with red-Corral. You may prepare all these things together, or a-part upon Porphyrie; in the same manner you may prepare the Eastern-Bole, and the *Terra Sigillata*; bruise together in a Brass-Mortar, the bone of the Deer's-Heart, the Shavings of Harts-horn, and Ivory, the Sandals, the Root of Tormentil, the Grains of Kerms, the Cretan-Dittany, the Red-Roses, the Myrrh, the Seeds of Citron, Sorrel, and Purslain. Beat the Saffron apart, being dry'd before; beat also the Musk, and Amber-grise apart, adding to them some part of the Citron-seed reserv'd for that purpose: then mix all the Powders except the Saffron, which must be first put into a Marble-Mortar, there to be mix'd with a wood'n-Pestle, in some ounces of the Syrup prescrib'd, the consistence whereof ought to be no thicker then that of ordinary Syrups; then add thereto by degrees the other Powders, joyning them, and intermixing with them together, at several repetitions all the Syrup, the quantity whereof ought to be but four times the weight of the Powder, whereas if it had been to have been boyl'd to the consistence of a soft Electuary, the Powders would have suckt up six times as much in weight of Syrup, by reason of the dryness of the most part of the Ingredients. And therefore care must be tak'n, that neither the Physicians nor the Patients be deceiv'd in the little Doses of this Confection, because of the small quantity of Powder which they contain, when the Syrup is more boyl'd then it should be. When the Powders and Syrups are mix'd together, add the Leaves of Gold and Silver, and put up the Confection in a white-Earth'n-Pot well-stopp'd.

Some may wonder that Syrup of Clove-Gillow-flowers is here prescrib'd, instead of Syrup of Lemons, which all Writers prescribe. But when they shall find by experience, that this last being made use of fails not to work upon the Earths and Stones at the same time, to raise a great effervescency, and to cause the Electuary to swell, so as to make it run over if the pot be not very large, and by degrees to dark'n the colour, especially if you put in any Ir'n Spatula; they will without doubt approve this change, in regard that Syrup of Gillow-flowers being very proper to strength'n the Heart, the Brain, and all the Noble-parts, and to second the good effects of this Composition, is also as fit to unite and embody all the Ingredients, imparting at the same time, its lovely purple-colour, and its delightful smell, without the fear of any effervescency, or alteration, which the acid of the Syrup of Lemons causes to the Earths and Stones, and at the same time to the whole confection.

If it be objected, that the Acid of the Syrup of Lemons serves to open the Stones, considering that the Juice of Lemons, which is the foundation of the Syrup, is able to dissolve them; I answer, that that Juice making but a third part of the Syrup, and being very much weak'n'd

weak'n'd by the addition of the Sugar, can act but very feebly, nor touch any more then the superficies of the fragments, and so the success would answer but ill to the intentions which they might have, considering also that the sole Preparation of the Stones upon the Porphyrie, reduces them to that condition wherein they ought to be, to qualifie in the Stomach the sharpness of the acids, which they meet with there.

The bones of Deer's-hearts are not so scarce, but that you may meet with them with little pains and expence; but if they were not to be had, you might in their place use the Harts-horn, when the Velvet-Head begins first to appear, and which are much better then the bones of the Hearts of Oxen, which some commend in their room.

The Shavings of Harts-horn is here very properly preferr'd efore Harts-horn burnt; because the Shavings enjoy all the good parts, which the Harts-horn looses in Ustion. For it not only contains the muscilaginous and Cordial part, which it affords to Gelly's, but the volatile Salt, Spirit, and Oyl, which we draw forth by distillation, all which parts vanish in Ustion.

As for the Philosophical Ustion of Harts-horn, which some have allow'd, I cannot think any better of it; for though it be done with a heat less violent, yet the most part of the Juice is thereby lost, and a good part of the volatile salt, Spirit and Oyl which it contain'd before.

The vertues of Confection of Jacinth are very little inferiour to those of *Confectio Hamech*. It has this also particular, that it closes more, and that it is more proper to kill Worms.

It is tak'n in Bolus alone, or mix'd with other Powders, or Opiates, or else dissolv'd in Wine, or in Broth, or in some Cordial Liqueur. The Dose is from a Scruple to a Dram, and sometimes two. It is also outwardly apply'd in liquid and solid Epithemes.

Electuarium Diascordium E- mendatum.

<i>Rx. Scordii,</i>	
<i>Rosarum Rubrarum Exungularum, &</i>	
<i>Boli Armena, an.</i>	3j β.
<i>Resina Stryacis,</i>	
<i>Cinnamomi,</i>	
<i>Cassia Lignea,</i>	
<i>Foliorum Dittamni Cretici,</i>	
<i>Radicum Tormentilla,</i>	
<i>Bistorta,</i>	
<i>Gentiana,</i>	
<i>Galbani,</i>	
<i>Succini,</i>	
<i>Terra Lemnia, an.</i>	3 β.
<i>Extracti Opii,</i>	
<i>Piperis Longi,</i>	
<i>Zinziberis,</i>	
<i>Seminis Oxalidis, an.</i>	3 ij.
<i>Mellis Rosati colati, & in Electuarii mollis</i>	
<i>consistentiam cocti,</i>	℥ ij 3 iij.
<i>Vini Malvatici,</i>	3 ij.

A Reform'd Diascordium E- lectuary.

<i>Rx. Water-Germander,</i>	
<i>Red-Roses cleans'd from their</i>	
<i>Whites, and</i>	
<i>Bole-Armenian, an.</i>	3j β.
<i>Storax,</i>	
<i>Cinnamon,</i>	
<i>Cassia-Wood,</i>	
<i>Leaves of Cretan-Dittany,</i>	
<i>Roots of Tormentil,</i>	
<i>Snakeweed,</i>	
<i>Gentian,</i>	
<i>Galbanum,</i>	
<i>Amber,</i>	
<i>Lemnian Earth, an.</i>	3 β.
<i>Extract of Opium,</i>	
<i>Long-Pepper,</i>	
<i>Ginger,</i>	
<i>Sorrel-seed, an.</i>	3 ij.
<i>Honey of Roses strain'd and boyl'd to</i>	
<i>the consistence of a soft Electuary, ℥ iij 3 iij.</i>	
<i>Malmsey,</i>	3 ij.

Make an Electuary according to Art.

It was well done to make use of Red-Roses cleans'd in this Electuary, and to put in Honey of Roses, instead of common Honey, to preserve the room of Conserve of Roses, which *Fracastrorius*, Authour of this Electuary had prescrib'd. The reason of this change was, for that though Conserve of Roses may be beaten, and pass'd through a sieve turn'd the wrong way, it has however those thick parts that will make the body of the Electuary seem to be ill united, and will remain at the bottom of the Mortar, when you dissolve the Electuary in any Liqueur. Whereas the dry Roses pulveriz'd with

with other Ingredients, cause the body of the Electuary to seem more uniform, and will preserve their vertue a longer time, by means of the Honey which encloses it. On the other side, the Honey of Roses being impregnated with the vertue of the Red-Roses, is at least as proper for mixture, union, and preservation of the Powders, as common Honey, and fortifying the vertue of the Red-Roses, renders the Electuary more odoriferous and pleasant, then otherwise it would be.

With as good reason is the quantity of the Water-Germander augmented, as well because it is a Plant that abounds in vertue, as for that it gives the name, and serves as a foundation to the Electuary, and therefore ought not to be less in quantity then any other of the Ingredients us'd in the Powder.

The Rosin of Storax, is here preferr'd before Storax in Tears, for the reasons giv'n in the Reformation of Treacle.

The Gum-Arabic is left out, which could only serve as a Glue to the Electuary, and Amber is put into its place, whose Cephalic, Cordial, and Hysteric vertues are esteem'd by all Authors.

The Preparation of this Electuary will be found to be very easie, if after you have well-chosen and cleans'd all the Ingredients, without taking care to dissolve any Gum in Wine, according to the custom of the Ancients, you reduce them only into Powder in a great Brass-Mortar, among the other Ingredients, and having pass'd them all through a silk-sieve, and dissolv'd the two drams of Extract of *Opium*, in two ounces of Malmsey, or good Spanish-Wine, you incorporate the whole with Honey of Roses clarify'd and boil'd to the consistence of a soft Electuary.

This Electuary is very little inferiour in vertue to the Treacle, and indeed is to be preferr'd before it in Diseases, where too much heat may be dangerous. It is particularly us'd in Malignant Fevers, in all Epidemic Diseases; and is very much commended not only as a cure, but a preservative against the Pestilence. It is very much esteem'd against the Worms, and against all putrefaction, against Windy-Cholics, want of retention in the Stomach, against Diarrhea's, Dysenteries, and all the difficulties of the Intestines, to stop Fluxes, to alluage Pains; the ordinary Dose being from one Scruple to one Dram. It is tak'n in Bolus, or dissolv'd in Wine, Broth, or any Cordial-Liquor.

Opiata Salomonis.

<i>R. Citri Saccharo conditi,</i>	<i>℥ viij.</i>
<i>Conserva Oxytriphylli,</i>	
<i>Florum Rorismarini, &</i>	
<i>Buglossi, an.</i>	<i>℥ ij.</i>
<i>Mithridatii veteris,</i>	<i>℥ j.</i>
<i>Rosarum Rubrarum Exungulat. siccarum,</i>	
<i>Radicum Enula Campana, &</i>	
<i>Dittamni Cretici,</i>	
<i>Seminis Contra-Verme,</i>	
<i>Citri mundati,</i>	
<i>Cardui Benedicti,</i>	
<i>Rasura Cornu Cervi, an.</i>	<i>℥ ss.</i>
<i>Corticis Citri sicci,</i>	
<i>Santali Citrim,</i>	
<i>Radicis Gentiane,</i>	
<i>Offis e Corde Cervi, an.</i>	<i>℥ ij.</i>
<i>Cinnamomi,</i>	
<i>Macis,</i>	
<i>Caryophyllorum, &</i>	
<i>Cardamomi minoris, an.</i>	<i>℥ j.</i>
<i>Grana Juniperi in Aceto scillitico per noctem</i>	
<i>infusa,</i>	<i>N°. xxiv.</i>

Salomon's Opiate.

<i>R. Citron condited with Sugar,</i>	<i>℥ viij.</i>
<i>Conserve of Wood-Sorrel,</i>	
<i>Flowers of Rosemary, and</i>	
<i>Bugloss, an.</i>	<i>℥ ij.</i>
<i>Of Mithridate,</i>	<i>℥ j.</i>
<i>Red-Roses dry'd and cleans'd,</i>	
<i>Roots of Elecampane, and</i>	
<i>Cretan-Dittany,</i>	
<i>Wormseed, and</i>	
<i>Seeds of Citron cleans'd,</i>	
<i>Carduus Benedictus, and</i>	
<i>Shavings of Harts-horn, an.</i>	<i>℥ ss.</i>
<i>Dry'd Citron-rind,</i>	
<i>Yellow-Saunders,</i>	
<i>Root of Gentian,</i>	
<i>Bone of a Deer's-heart, an.</i>	<i>℥ ij.</i>
<i>Cinnamon,</i>	
<i>Mace,</i>	
<i>Cloves, and</i>	
<i>Lesser Cardamoms, an.</i>	<i>℥ j.</i>
<i>Juniper-berries infus'd a whole night in</i>	
<i>Vinegar of Squills,</i>	<i>N°. xxiv.</i>

Make up the Opiate with Syrup of the Juice of Citrons.

Foubert was the first that publish'd this Opiate, and would have you to believe that one Salomon was the first that made it. It is so set down in *Remens* and *Bauderon*. The quantity

quantity of the Ingredients is however different in some things. Particularly the Bone of Deers-heart is not mention'd in any of the Editions of *Bauderon*, whether it were to spare cost, or out of inadvertency, I will not determine. No matter who was the Authour of this Opiate, but we may be assur'd that it ought to have its place in this *Pharmacopœa*. It may be also observ'd, that this Receipt is somewhat different from the rest, but the alterations are certainly for the better.

The Sugar in Powder is here very unnecessary, because all the Ingredients are to be incorporated with Syrup of Citron, which has in it self Sugar enough without needing any more in the Opiate. Red-Roses dry'd are to be preferr'd before the Conserve, for the reasons giv'n in the *Diascordium*. The Conserve of Wood-Sorrel is preferr'd before Sorrel, because it is a Cordial incomparably much better. The dry Root of Elecampane is put instead of the Conserve, but in lesser quantity, out of regard to the Sugar, which makes at least two thirds of the Conserve; as also to the moisture and weight of the Roots, when it is us'd instead of the Conserve. The Leaves of Cretan-Dittany, much augment the force of the Opiate. The flowers of Rosemary and Bugloss, will become almost impalpable in beating in the Mortar.

To prepare this Opiate, cut the dry Citron-peel, and beat it in a great Brass-Mortar with the Saunders, then add the Roots of Elecampane, Dittany, and Gentian, the bone of Deer's-heart, the shavings of Harts-horn, and mingling by little and little all the Seeds, and other Ingredients which are to be pulveriz'd, and also the infus'd Juniper-berries infus'd the night before in Vinegar of Squills. Pass the Powder through a silk-sieve; Bruise the Citron-rind condit in a Marble-Mortar with the Conserve of Rosemary and Bugloss-Flowers, and pass them through a hair-sieve, the wrong side uppermost. Then moist'n this Pulp with about twice as much the weight of Syrup of Citron, such as is sold in the Shops, in which mixture incorporate the Mithridate, and by little and little, and alternatively the Powders, and the rest of the Syrup, the proportion whereof may be three times the weight of the Powder, though the Authour prescribes no more then to give the Opiate its due consistency. There is no fire to be us'd for the mixture of this Opiate, which is to be put up close in a white Gally-pot for use.

This Opiate is good against the Pestilence, and all Epidemic Diseases. It strength'n the Heart and Stomach, kills the Worms in the Stomach and Bowels, resists putrefaction, stays Vomiting, creates an Appetite, and helps digestion. It is much us'd in *Languedoc*. The Dose and manner of taking it is the same with *Diascordium*, and *Confection of Jacinth*.

Antidotum Orvietanum;

An Orvietan Antidote.

R. Radicum Scorzonera,
Carlina,
Imperatoria,
Angelica,
Bistorta,
Aristolochia tenuis,
Contra-yerva,
Dictamni Albi,
Galanga,
Gentiana,
Costi,
Acori veri,
Seminis Petroselinæ Macedonici,
Foliorum Salvia,
Rorismarini,
Galega,
Cardus Benedicti,
Dictamni Cretici,
Baccarum Lauri, &
Juniperi, an. 3j.
Cinnamon,
Caryophyllorum,
Macis, an. 3ß.
Viperarum siccarum cum cordibus & Hepa-
tibus, &

R. Roots of Vipers-grafs,
Carline-Thistle,
Masterwort,
Angelica,
Snakeweed,
Thin Birthwort,
Contra-yerva,
White-Dittany,
Galanga,
Gentian,
Costus,
True Acorus,
Seed of Macedonian Stone-Parsley,
Leaves of Sage,
Rosemary,
Goats-Rue,
Blessed Thistle,
Cretan-Dittany,
Berries of Laurel, and
Juniper, an. 3j.
Cinamon,
Gillow-flowers,
Mace, an. 3ß.
Dry'd Vipers with the Hearts and Li-
vers, and
Theriaca

*Theriaca Veteris, an.
Mellis opt. despumati,*

℥ iv.
℔ viij.

Old Treacle, *an.*
Best clarify'd Honey,

℥ iv.
℔ viij.

The good effects that the Orvietan well-prepar'd has formerly produc'd, has giv'n occasion to divers cheats, to use all their endeavours to make the World believe, that either they or some of their Predecessors have been the sole inventers thereof, and that only they had the true Receipt. Inasmuch that several of these Impostors have overspread Provinces and Kingdoms, and under the fraudulent appearance of some good success, by pantalooning and buffooning it, before the credulous people in public places, have caught them by their Money, and got considerable sums together, by the extraordinary vent of their suppos'd Orvietan. Considering the great quantity whereof, it was impossible for them to have found the necessary Ingredients, or to have had time to make a just Preparation, if they had either been willing, or had been able. Whence it has come to pass, that in several places they have not been able to secure themselves upon their Stages from the Poysons that have been brought them, by Persons that were not of their own confederacy, no more then from the bitings of Asps and Vipers, with which they had not been before familiar. Had these Impostors met with distrustful persons that took delight to discover their Impostures, they had not over-run so many Countries, nor couen'd such a World of people; nor would they have had such easie Licenses to prepare and sell unpunish'd a Medicine that ought not to pass the hands of any but Men of credit and understanding.

All the Leaves and Roots must be dry'd and pulveriz'd together in a great Brass-Mortar, beginning with the most solid. Pass them through a silk-sieve cover'd, and having scumm'd the Honey, without any addition of moisture, add some part of the Powder to it, and continue to mingle alternatively sometimes the Honey, and sometimes the Powder, till the whole be incorporated, and reduc'd to the consistency of a soft Electuary, which you must let alone to cool, and then put up in a Pot close stopp'd for your use.

The proportion of Honey is larger here then for the Treacle of the Ancients, because there is neither Oyl of Nutmegs, nor Balsom, nor Turpentine, nor any other juice to officiate for the Honey; and for that otherwise, the dryness of the Powders would predominate over the Honey, suck up the Moisture, and drying the Electuary, would give way for the Air to enter and corrupt the whole Mass.

Orvietan thus prepar'd is of great efficacy against all sorts of Poysons, against the Small-pox, Measles, and all sorts of Epidemic Diseases. It is also proper against all cold Diseases of the Brain and Stomach, and against all Windy-cholicks. The Dose is from a Scruple to a Dram, and sometimes to two, for strong persons. It may be tak'n upon the point of a Knife, or wrapt up like a Bolus, or dissolv'd in Wine, or some Cordial Liquor.

Electuarium de Satyrio.

℞. *Radicum Satyrii succulentarum in aqua
Nappe ad mollitiem coctarum,* ℥ iv.
Radicis Eringii condita,
Pistaciarum mundatarum,
*Confectionis Alkermes cum Moscho &
Ambra, an.* ℥ ij.
Nucis moschata condita,
Zinziberis conditi, an. ℥ j.
Renum Scincorum,
Priapi, &
Testiculorum Cervi,
Pulveris Viperini, an. 3 vj.
Ambra Grisea,
Seminis Eruca,
Fraxini,
Piperis longi, &

Satyrian Electuary.

℞. The Juicy-roots of Satyrian boyl'd very soft in Orange-flower-water, ℥ iv.
Root of Eringo's condited,
Pistaches cleans'd,
Confectio Alkermes with Musk and Amber, *an.* ℥ ij.
Nutmegs condited,
Ginger condited, *an.* ℥ j.
Kidneys of Land-Crocodiles,
Pizzle, and
Stones of a Deer,
Powder of Vipers, *an.* 3 vj.
Ambergriefe,
Seeds of Rocket, and
Ash,
Long-Pepper, and

Cardamom

<i>Cardamomi minoris, an.</i>	3jβ.	Lesser Cardamoms, an.	3jβ
<i>Mofchi Orientalis,</i>	3β	Oriental Musk,	3β
<i>Oleorum Cinnamomi, &</i>		Oyls of Cinnamon, and	
<i>Caryophyllorum, an.</i>	gutt. vj.	Cloves, an.	drops vj.

We shall meet within several Dispensatories several Receipts of *Diasatyrium*, or Electuaries resembling it in name and qualities. But you shall hardly find one whose Ingredients are more proper to produce the Effects expected from such a Composition, or whose quantities are more regular.

Take the Roots of *Satyrium* well grown, casting away the Fibers and wither'd parts. Cleanse them from their Rind and all superfluities, and boil them gently in Orange-flower water, in a glaz'd earthen-Pot cover'd, 'till they are sufficiently tender; then bruise them in a Marble Mortar, and pass them through a Hair-Seve turn'd the wrong-side uppermost. In the same manner beat and sift the condited *Eringo-Root*, the *Pistaches*, the *Nutmegs* and the *Ginger*; Rasp the *Harts-Pizzle*, cut the *Stones* small, being both dry'd by fire in a Chimney, and beat them in a Brass-Mortar with the *Pepper*, *Cardamoms*, *Seeds*, *Scinc's reins*, and *Vipers* dry'd; and pass the powder through a silk-Sieve cover'd; bruise the *Musk* apart, mixing with it never so little *Sugar* candy'd; and the *Ambergreece* also apart, mixing with it some drops of *Oyl* of *Cloves*; then mingle the *Pulps* with the Confection of *Alkermes*, all the *Powders* and *Oyls*, in a Marble-Mortar with a wooden-Pestle, adding as much *Syrup* of *Gillow-flowers* as is requisite to give the whole a due consistence of an Electuary: Then put it up close for use.

This Electuary is very proper to restore decay'd strength; it fortifies and heats those that the *Latins* call *frigidos & maleficiatos*, *frigid* and bewitch'd: It multiplies *Seed*, and provokes and disposes people to Lust. It may be us'd by both *Sexes*; but the *Musk* and the *Ambergreece* must be left out, when giv'n to *Women* that cannot away with sweet scents; the Dose is from one dram to two. This Electuary is to be tak'n fasting Morning and Evening in *Bolus*, drinking after it a Glass of *Spanish-wine*, wherein you may also dissolve the Electuary. It may be used as often as occasion requires; and if it be extraordinary, take half an Ounce.

Philonium Magnum.

<i>R. Seminis Hyoscyami, &</i>	
<i>Papaveris Albi, an.</i>	3v.
<i>Extract. Opii,</i>	3jβ.
<i>Cassia lignea,</i>	
<i>Cinnamomi, an.</i>	3jβ.
<i>Semini Apii,</i>	
<i>Petroselinum Macedonici,</i>	
<i>Feniculi,</i>	
<i>Dauci Cretici,</i>	
<i>Costi,</i>	
<i>Myrrhe,</i>	
<i>Castorei, an.</i>	3j.
<i>Croci,</i>	
<i>Pyrethri,</i>	
<i>Nardi Indica, an.</i>	3j.
<i>Mellis optimi despumat.</i>	3ix.

The great Philonium, or Pain-asswager.

<i>R. Seed of Henbane, and</i>	
<i>White Poppy, an.</i>	3v.
<i>Extract of Opium,</i>	3jβ.
<i>Cassia-wood,</i>	
<i>Cinnamon, an.</i>	3jβ.
<i>Seed of Parsley,</i>	
<i>Macedonian stone-Parsley,</i>	
<i>Fennel,</i>	
<i>Cretan wild Carrot,</i>	
<i>Costus,</i>	
<i>Myrrh,</i>	
<i>Castoreum, an.</i>	3j.
<i>Saffron,</i>	
<i>Pellitory of Spain,</i>	
<i>Indian Spikenard, an.</i>	3j.
<i>Best clarify'd Honey.</i>	3ix.

Wonder not that *Euphorbium* is left out of this Composition; especially since the Ancients made use of it, pretending it was a true Corrector of *Opium*. But they that understand the nature of *Euphorbium*, and know that it is a Gum very hot, very biting, and very violent in its operations, when it is us'd but in a small quantity, will never question but that it has great need it self of being corrected, and finding that it is never to be mix'd but among Remedies that may temper its heat, qualify its acrimony, and refrain its violence will never use it at all in any Remedies whatsoever to be taken inwardly. Its extraordinary concussion of the brain, caus'd by the

least particle of Euphorbium taken at the nostril; and the violent and long continued sneezings which it provokes, are enough to make any person fear the violence of a Gum so terrible to those who have beheld its effects. And the more reason they will have to fear them, when they consider that Euphorbium is one of the most violent Purgers that are to be found amongst simple Drugs, so that the weight of two grains will make an extraordinary havock. The heat of Costus, or of any of the other ingredients that make up this Opiate, is inconsiderable to that of this Gum. And it is no wonder that Opium so often us'd to stop the violent effects of purgative Medicines, is not powerful enough to tame the violent effects of Euphorbium. Nevertheless there is some probability that the apprehension which the Ancients had of the coldness of Opium, mov'd them to have recourse to extraordinary hot Remedies, to counterbalance that vainly imagin'd coldness; not considering that all the parts of Opium, except the earthy, are hot, as they will find that examine them.

Pulverize those Ingredients that are to be pulveriz'd, and pass them through a silk'n-Sierce cover'd. Dissolve the Extract of Opium in about an Ounce of good Malmsey, and having incorporated it with a small quantity of scumm'd Honey warm, add by degrees sometimes the Powder, and sometimes the Honey, till the whole be dispens'd, and that all the Ingredients are well mix'd and united together. Then when the Opiate is cold put it up in a white earthen Pot.

Philonium appeases all inward pains that happen to the Stomach, Belly, Hypochondrium's, Liver, Spleen, Reins, and Marrix, especially proceeding from a cold cause. It dissipates the Hiccup and Ventosities, moderates the violence of Coughs; is highly esteem'd against Dysenteries, and internal fluxes of blood; it remedies difficulties of Urine; it relieves against Pleurisies, stops Fluxes, restores the weak and languishing. Above all things, it is highly commended against Cholicks. It may be taken in Bolus, or dissolv'd in Wine, or in Cordial water. The Dose is from half a Scruple to half a Dram. It is commonly made use of in Anodyne Clysters, from half a Dram to two. It is also us'd in Narcotick Liniments, mix'd with *Unguentum populeum*, or other Medicines.

Electuarium de Baccis Lauri.

<i>R. Baccarum Lauri, &</i>	
<i>Foliorum Ruta siccorum, an.</i>	3 <i>ss</i>
<i>Sagapeni,</i>	
<i>Opoponacis, an.</i>	3 <i>ss</i>
<i>Seminis Ameos,</i>	
<i>Cumini,</i>	
<i>Nigelle Romana,</i>	
<i>Ligustici,</i>	
<i>Carvi,</i>	
<i>Dauci Cretici,</i>	
<i>Acori veri,</i>	
<i>Origani,</i>	
<i>Amygdalarum amararum,</i>	
<i>Piperis longi,</i>	
<i>Nigri,</i>	
<i>Mentastri,</i>	
<i>Castorei, an.</i>	3 <i>j</i>
<i>Mellis opt. despumat. triplex pondus.</i>	

Electuary of Laurel Berries.

<i>R. Laurel Berries, and</i>	
<i>Dry'd Leaves of Rue, an.</i>	3 <i>ss</i>
<i>Sagapene,</i>	
<i>Opoponax, an.</i>	3 <i>ss</i>
<i>Seeds of Bishops-weed,</i>	
<i>Cumin,</i>	
<i>Roman Nigell,</i>	
<i>Libistick,</i>	
<i>Caraway,</i>	
<i>Cretan wild Carrot,</i>	
<i>True Acorus,</i>	
<i>Origany,</i>	
<i>Sweet Almonds,</i>	
<i>Long Pepper,</i>	
<i>Black Pepper,</i>	
<i>Wild Mint,</i>	
<i>Castoreum, an.</i>	3 <i>j</i>
<i>Of the best despumated Honey, treble the weight.</i>	

The Berries of Laurel must not be inferior in quantity to the Leaves of Rue, because they are the foundation of the whole. The quantities of the Sagapenum and Opoponax are alike, because they are alike in qualities. The rest require no alteration.

The Preparation of this Electuary is very easie. For having pulveriz'd the Gums among the dry Ingredients, and pass'd the whole through a silk'n-Sierce cover'd, incorporate the Powder at several intervals, by little and little, with three times the weight of warm purif'd Honey: And put up the Electuary when it is cold.

This

This Electuary is very much recommended for the ease and cure of windy Cholicks, and particularly the Iliac passion. It is proper in all difficulties of Urine, and against Hysteric passions. The Dose is from a scruple to a dram, and sometimes to two: For Clysters it is generally prescrib'd from half an Ounce to an Ounce in proper Decoctions.

Electuarium Micleta.

R. *Mirabolanorum Citrinorum,*
Chebularum,
Indorum,
Bellericorum, &
Emblicorum mundatorum, an. 3 v.

In pulverem redigantur & leviter torrefiant, deinde

R. *Seminum Nasturtii,*
Anisi,
Cumini,
Carvi,
Feniculi, &
Ameos, an. 3 iij.

Terantur, paucis aceto irrorentur, & ficientur, tunc

R. *Spodii ex Ebore,*
Balaustiorum,
Sumach,
Mastich.
Gummi Arabici, an. 3 ij β.

Electuary of Micleta

R. Mirabolans yellow,
Chebula,
Indian,
Bellerica, and
Emblica, an. 3 v.

Reduce them into Powder, and parch them, then

R. Seeds of Cresses,
Anise,
Cumin,
Caraway,
Fennel,
Bishops-weed, an. 3 iij.

Bruse them, sprinkle them with a little Vinegar, dry them, then

R. Spodium of Ivory,
Pomegranate Flowers,
Sumach,
Mastich,
Gum Arabic, an. 3 ij β.

Take away the Kernels from the Mirabolans, and make use of the dry pulp that covers them, which you must pulverize, and lightly parch in an Iron-Skillet or Pan over a small fire, stirring the Powder often with a Spatula. Pulverize the Seeds grossly, and sprinkle them with good Vinegar, and then having dry'd them, pound them outright in a large Brazen Mortar among the Pomegranate Flowers, the Spode, the Sumach, the Gum Arabic, and the powder of Mirabolans, and pass them all through a silk Sieve. Pulverize the Mastich apart, which must be chosen in tears, which may be easily done, by adding some few drops of water to keep it from sticking to the Mortar and Pestle. Mix the Powders very well, and incorporate them at several repetitions with four times as much the weight of warm Syrup of Mirtles, and the Electuary will be well made, and fit to be put up in a proper Pot to be kept for use.

The Spode which is but calcin'd Ivory, is not to be made use of in Compositions, which require the principal parts of the Ivory, that consist of its volatile salt, spirit and oyl, which are wholly dissipated by Calcination: But the principal operation of this Electuary being founded only upon the astringency of the Ingredients that compound it, and the terrestrial and restringent quality of the Ivory remaining after Calcination, it may be here prescrib'd well enough to the purpose.

This Electuary is very binding, and proper for the cure of Dysenteries, and all sorts of Fluxes of the belly; it serves to stay all internal Fluxes of blood, as also of the Hemorrhoids; it is also good to stay vomiting, and the inordinate flowing of the Menstruums, the Whites, and old Gonorrheas, difficult to cure. The Dose is from half a dram to two drams. It may be taken upon the point of a Knife, or in Bolus; or else dissolved in red Wine, or some astringent Liquor. It is also prescrib'd in astringent Clysters from half an Ounce to an Ounce.

Electuarium Aperiens Catharticum
D. D. D' AQUIN.

℞ Foliorum Senna Orientalis Munda-
torum, ʒiiij.
Diacrydion,
Trochiscorum Albandal
Agarici Electi,
Rhabbarbari, &
Seminis Violarum, an. ʒjß.
Sagapeni,
Myrrhe,
Ammoniæ, an. ʒj.
Antimonii Diaphoretici,
Mercurii dulcis, &
Pulveris trium Santalorum, an. ʒvj.
Salis Martis, &
Tamarisci, an. ʒß.
Mellis opt. absque Liqueoris additione despu-
mati, lbvj.

An opening purging Electuary of
Monsieur D' AQUIN.

℞ The cleansed leaves of Oriental Sen-
na, ʒiiij.
Diagridion
Trochisks of Albandal,
Chosen Agaric,
Rhubarb, and
Seeds of Violets, an. ʒjß.
Sagapeni,
Myrrhe,
Ammoniac, an. ʒj.
Diaphoretic Antimony,
Mercurius dulcis,
Powder of the Three Saunders, an. ʒvj.
Salt of Iron,
Tamarisks,
The best Honey despumated without the
addition of Liqueoris. lbvj.

After you have carefully chosen and cleansed all the Ingredients of this Electuary, and got the Sagapennum, the Myrrhe, and Ammoniac in pure tears, pulverize the Gums among the other dry Medicaments. But if you find them a little too clammy, mix no more then the Powder can well bear without being too viscous, and reserve the rest of the Gums to melt in a great Brass-Mortar heated; and there incorporate them first with some small portion of the despumated Honey prescribed for the Electuary, then mix the Salts, and continue adding by degrees, sometimes the Honey, sometimes the Powders, till all the Ingredients are perfectly well united, adding at the latter end the Mercurius dulcis, and the Diaphoretic Antimony: by this means the Electuary will be well made and fit to be put up in a close Pot.

Monsieur D' AQUIN gave me the Receipt of this Electuary to impart it to publick view, as a Remedy very proper to open obstructions of the Liver, Spleen, Pancreas, Mesentery and the Matrix, and at the same time to void the tenacious humours that gather in those parts, for want of their wonted passage. The good effects of it will also appear if it be rightly administered in Cachexies, Quartane Agues, Hypochondriac distempers, and Dropsies; and particularly in the Diseases of Women, as the Green-Sickness, retention of the Menstruums, and in all the Maladies and Symptoms that proceed from obstructions of the Matrix. The dose is from two drams to half an ounce; and to six drams to Hydropical persons that are of age, where a less dose does not work effectually. It may be given in Bolus, dissolv'd in proper Liqueors, or mix'd with other Medicaments. But then regard must be had to the nature of the purgative Medicines with which it is joyn'd, and the Dose of this Electuary must be proportion'd accordingly.

**Electuarium Catholicum dupli-
cato Rhabbarbaro;**

℞ Polypodii Quercini comissi, ʒviij.
Seminis Fœniculi, ʒjß.
Coquantur igne moderato in aqua communis
lbviij. ad dimidia partis consumptionem;
coletur & exprimantur; colatura cum sac-
chari opt. lbiiij. coquantur ad Electuarii mel-
lis consistentiam: ab igne remotis adde Pul-
parum Cassia & Tamarindarum Orienta-

*Catholicum, or universal purging Ele-
ctuary with a double quantity of*
Rhubarb.

℞ Polypody of the Oak bruised, ʒviij.
Fennel-seed, ʒjß.
Boyl them over a moderate fire in lbviij.
of common water, to the consumption
of the half part, strain and press them.
Boyl the strain'd Liqueor with lbiiij. of
the finest Sugar, to the consistence of an
Electuary: when they are taken off the
fire

<i>linum inspissatorum, an.</i>	℥iij.	fire, add to them Pulps of Cassia and thicken'd Oriental Tamarinds together, an.	℥iij.
<i>Deinde sensim permisce Pulveres sequentes.</i>		Then by degrees mingle the following Powders.	
<i>Rx. Rhubarbari Electi, &</i>		<i>Rx. Choice Rhubarb and Leaves of Oriental Senna cleansed, an.</i>	℥iij.
<i>Foliorum Senna Orientalium mundatorum, an.</i>	℥iij.	Seeds of Violets and	
<i>Seminis Violarum &</i>		Anise, an.	℥ij.
<i>Anisi, an.</i>	℥ij.	Scrap'd Liquorice,	℥j.
<i>Glycyrrhiza rasa,</i>	℥j.	The four greater cold Seeds cleansed, an.	℥℥.
<i>Semen quatuor frig. maj. mundat. an.</i>	℥℥.		

You will find that this Electuary differs in many things from that of the Ancients, as also of the Moderns: But the difference seems to be very rational. In the first place the quantity of Polypodie prescrib'd by the Ancients, is remov'd and added to the Decoction; that by imparting to the Electuary the vertue of all the Polipody to prevent an inconvenience, which is, that the Polipody being of it self very dry, and being moisten'd with the Decoction that remains among the Sugar, swells and becomes by that means thicker than the rest of the Electuary, and is less pleasing to the tast and more difficult to be dissolv'd.

The taking quite away the two drachms of Sugar candi'd, and so much Sugar pennet, as the Ancients had prescrib'd in this Electuary, will be no wonder to those, who shall consider how little they avail in so small a quantity. Whereas the Rhubarb doubl'd in its quantity renders the Electuary not only more effectual, but answers the proportion of the Powders, and supplies the place of the Polipody cut off. Nor must we disapprove the choice here made of Violet-seed, instead of the dry'd Flowers; in regard this Seed contains the principal vertue of the Plant: whereas the Flowers together with their colour have lost whatever they had of good. Upon which take this advertisement, that certain Violet-flowers, which they dry in great quantities in *Languedoc*, and which they sell for Violet-flowers are no other then the Flowers of that Plant which Authors call *Viola Tricolor* or *Flos Trinitatis*, in English *Pansies*, or *Hartssease*, whose quantities are very different from the true Violets.

There are some that beat the Rhubarb a-part, but there is no necessity for that, in regard it may be very well beaten among the other dry ingredients. The Liquorice must be scrap'd, and the Senna and Annise very well cleans'd, and beaten all together with the Rhubarb, the Violet, and cold Seeds, and pass'd through a silk'n-seirce. The Powder being made, bruise the Polipody very well, and boyl it over a moderate Fire in ℥viii. of Water, as prescrib'd, adding at the last the Fennel bruis'd. Then strain the Decoction, and press out the sediment. Take sixteen ounces of good Cassia and extract the pulp, and pass it through a hair-sieve revers'd, to get four Ounces, which you must reserve. Moistn with the Decoction, six ounces of Oriental Tamarinds, and having held them for some time over the hot Embers, beat them in a Marble-Mortar with a Wooden Pestle, and pass the pulp through a hair-sieve revers'd, repeating the same operation till all the pulp be pass'd through, except two ounces of Lee's. Then evaporate the moisture of the pulps, stirring them from time to time with a wooden Spatula till they are sufficiently thicken'd. Then boyl the Sugar with the rest of the Decoction, to the consistence of a soft Electuary, and having put the pulps into a Bason, pour upon them some part of the Syrup, and having incorporated them together, add at several repetitions, sometimes Powder, sometimes Syrup, till all the ingredients are perfectly mingl'd. And when the Electuary is cold put it up in a Syrup-pot.

This Electuary is call'd Catholicon, because it is an Universal purger of ill humors out of the body; as being compos'd of Medicaments of which some are proper to purge Flegm, others Choller, and others Melancholly; for, though I do not believe that any simple or compound Medicament is able to purge Choller, or any other single humour, and separate it from the rest which are in the Bowels and Stomach, yet may we believe this Electuary to be an Universal Puiger very effectual and very gentle. Which makes it often us'd in continu'd and intermitting Agues, in *Spasmodics*, Diarrheas, and defects of retention in the Stomack and Bowels. It may be given to all Ages and Sexes, particularly to Women with Child; because as it gently purges off the ill humors, it strengthens all the parts and leaves no bad effects behind it. The Dose is from two Drachms

Drachms to an Ounce. It is giv'n in Bolus, or dissolv'd in some distill'd water or proper decoction. It may be also mix'd with other Medicaments, or dissolv'd in Glisters, and then the Dose is from an Ounce to an Ounce and a half.

Electuarium Lenitivum.

<i>R. Hordei Mundati,</i>	
<i>Polypodii Quercini,</i>	
<i>Fol. senna Oriental. mundat.</i>	
<i>Passularum purgatarum, an.</i>	℥ ij.
<i>Jujubarum,</i>	
<i>Sebesten,</i>	
<i>Tamarindorum, &</i>	
<i>Prunorum Dulcium enucleatorum, an.</i>	℥ j.
<i>Mercurialis,</i>	℥ j.
<i>Violarum recentium, & Capill. Ven. Mon-</i>	
<i>speliensis, an.</i>	Mj.
<i>Glycyrrhizæ,</i>	℥ j.
<i>Coquantur ex arte in Aqua communis lb ix.</i>	
<i>In Colatura expressa dissolve,</i>	
<i>Sacchari optimi,</i>	lb ix.
<i>Coque ad Electuarii molliis consistentiam:</i>	
<i>ab igne remotis adde,</i>	
<i>Pulparum Cassia,</i>	
<i>Tamarindorum,</i>	
<i>Prunorum Dulcium,</i>	
<i>Conserve Violarum, &</i>	
<i>Pulveris Senna mundat. an.</i>	℥ ij.
<i>Rhei Elect. &</i>	
<i>Seminis Anisi pulveratorum, an.</i>	℥ j.

Lenitive Electuary.

<i>R. Cleans'd French Barley,</i>	
<i>Polypody of the Oak,</i>	
<i>Cleans'd leaves of Oriental Senna,</i>	
<i>Ston'd Raisins, an.</i>	℥ j.
<i>Jujubs,</i>	
<i>Sebesten,</i>	
<i>Tamarinds, and</i>	
<i>Sweet Prunes ston'd, an.</i>	℥ j.
<i>Herb Mercury,</i>	
<i>Fresh Violets, and Venus-hair of Mont-</i>	
<i>pelier, an.</i>	Mj.
<i>Liquorice,</i>	℥ j.
<i>Boil them according to Art in lb ix. of</i>	
<i>ordinary water: in the Liquor strain'd</i>	
<i>and press'd, dissolve</i>	
<i>Of the best Sugar,</i>	lb ix.
<i>Boil them to the consistence of a soft E-</i>	
<i>lectuary: Take them off the fire, and</i>	
<i>add,</i>	
<i>Pulps of Cassia,</i>	
<i>Tamarinds,</i>	
<i>Sweet Prunes,</i>	
<i>Conserve of Violets,</i>	
<i>Powder of Senna cleans'd, an.</i>	℥ j.
<i>Choice Rhubarb, and</i>	
<i>Aniseed powder'd, an.</i>	℥ j.

In regard it is uncertain who was the Author of this Electuary, it happens that the Receipts of it are very various in dispensatories, and that the quantities of the Ingredients are ill proportioned. For they that understand the nature of the Ingredients of this Electuary and their preparation and proportion, can never think six ounces of Sugar, set down in several receipts, enough for the Pulps and Powders in this Electuary; and that there was reason to augment it too two pound. They will also acknowledge that the Rhubarb is added with as good judgment, to make the Electuary more effectual, though left out by others.

Boyl the cleans'd Barley in the water for a good hour, together with the bruised Polypody; then add the Fruit, cleans'd and cut, and then the Mercury, which must boyl with the rest above a quarter of an hour; then put in the Senna, Liquorice, Venus Hair, and Violets, and having giv'n them some bubblings, take the Decoction from off the Fire, and when it is half cold, strain and press it forth, and having added to it, two pound of Sugar, boyl them together to the consistence of a soft Electuary, and when it is off the Fire, incorporate by little and little the Pulps, Powders, and conserve of Violets stamp in a Marble-Mortar and pass'd through a hair-sieve, and when the whole is well mix'd and cold, put it up.

The virtues of this Electuary are very near the same with those of Catholicon, but somewhat inferior: However it is more proper to soften and make the passages slippery. The dose and manner of taking are almost the same with those of Catholicon; but it is more commonly us'd in Glisters then otherwise.

Electuarium Lenitivum, pro Clysteribus.

<i>R. Polypodii Quercini contusi,</i>	lb. iij.
<i>Foliorum Malvæ,</i>	

Lenitive Electuary for Glisters.

<i>R. Polypody of the Oak bruised,</i>	lb iij.
<i>Leaves of Mallows,</i>	

Althæa,

<i>Althea,</i>		<i>Marsh-Mallows,</i>	
<i>Viola,</i>		<i>March-Violets,</i>	
<i>Parietaria,</i>		<i>Paritary of the Wall,</i>	
<i>Mercurialis, &</i>		<i>Mercury, and</i>	
<i>Senecionis, an.</i>	<i>M iij.</i>	<i>Groundfel, an.</i>	<i>M iij.</i>
<i>Florum Camomil. &</i>		<i>Flowers of Camomil, and,</i>	
<i>Melilot. an.</i>	<i>M ij.</i>	<i>Melilot, an.</i>	<i>M ij.</i>
<i>Coquantur ex Arte in aqua communis lb xxx. Colatura cum mellis communis lb xxx. coquantur ad Electuarii mollis consistentiam; deinde dilue</i>		<i>Boil all these according to Art in lb xxx. of ordinary water; boil the strain'd Liquor with lb xxx. of common Honey to the consistence of a soft Electuary; then mix</i>	
<i>Pulpa prunorum dulcium,</i>	<i>lb iij.</i>	<i>Pulp of sweet Prunes,</i>	<i>lb iij.</i>
<i>Cassia, &</i>		<i>Cassia, and</i>	
<i>Tamarindorum, an.</i>	<i>lb ij.</i>	<i>Tamarinds, an.</i>	<i>lb ij.</i>
<i>Postmodum adde pulveres sequentes,</i>		<i>Then add the following Powders,</i>	
<i>R. Radicum Brionia,</i>		<i>R. Roots of Briony,</i>	
<i>Hermodactylorum,</i>		<i>Hermodactyles,</i>	
<i>Liquiritia,</i>		<i>Liquorice,</i>	
<i>Foliorum Senna Orientalis,</i>		<i>Leaves of Oriental Senna,</i>	
<i>Summitatum Gratiola,</i>		<i>Tops of Hedg-Hysop,</i>	
<i>Seminis Violarum, &</i>		<i>Seeds of Violets, and</i>	
<i>Anisi, an.</i>	<i>℥ xx.</i>	<i>Anise, an.</i>	<i>℥ xx.</i>
<i>Rhabarbari, &</i>		<i>Rhubarb, and</i>	
<i>Agarici, an.</i>	<i>℥ ix.</i>	<i>Agaric,</i>	<i>℥ ix.</i>

This Electuary, which may be call'd Lenitive for Glysters, will work good effects, and may be long kept, if following this Receipt, you are careful to prepare it rightly. I know there are some persons that do not so much regard it; who rather chusing to sell bad Glysters then good, make up their Lenitive with the worst Ingredients in their Shops, insomuch that they will put in the Sediments of the Infusions of their Roots, mingling the Pulp of Prunes with a little Honey, and giving that the Name of *Lenitive Electuary*. But these bad Examples are to be laid aside, as well for the easiness of the preparation, the finalness of the expence, as for the good which they may do, and the facility of being detected by the colour and consistence, wherein it very much resembles *Catholicon*.

Bruiſe the Polypody, and boil it in the water for a good hour; then boil the Herbs, being cut, for half an hour, after which add the Flowers; and having let them bubble a while, strain and press out the Decoction; wherein having dissolv'd the Honey prescrib'd, and having pass'd them through a Hair-Sieve, boil them over a moderate fire to the consistence of a soft Electuary: Scum it, and when it is half cold, mix the Pulps first by degrees, and then the Powders, observing the same method as for other soft Electuaries. When it is cold, put it up close.

The use of this Lenitive is so familiar, that I need not insist upon it; being only us'd in Clysters, to which purpose it is dissolv'd in some proper Decoction with Honeys, Sugar, Oyls, or other Remedies. The Dose is from half an Ounce to an Ounce, and sometimes to an Ounce and a half.

Electuarium Diaprunum, Simplex & Compositum.

R. Pruna Damascena recensia & matura,
No. C.
Coquantur igne lento in Aqua, *lb iij.*
Deinde per Cribrum inversum trajiciantur, & pulpa igne lento inspissetur & servetur.
In decocto prunorum leviter coquantur,
Seminis violarum contusi, *℥ j.*

Electuary of Prunes, Simple and Compound.

R. Damasus Prunes new and ripe,
No. C.
Boil them over a soft fire in three pints of water,
Then pass them through a reverse Sieve, and thick'n the Pulp with a gentle heat, and keep it.
In the decoction of the Prunes gently boil Violet-seed bruise'd, *℥ j.*

Colatura

<i>Colatura cum Sacchari opt. lb ij. ad Ele- ctuarii mollis consistentiam coquatur,</i>		Boil the straining with two pound of the best Sugar, to the consistence of a soft Electuary,	
<i>Parum refrigerato permisce,</i>		When it is a little cold, mix	
<i>Pulpa prædict. prunorum,</i>	lb j.	Of the foresaid pulp of Prunes,	lb j.
<i>Pulpa Cassia, &</i>		Pulp of Cassia, and	
<i>Tamarindorum, an.</i>	3 j.	Tamarinds, an.	3 j.
<i>Et tandem sequentia pulverata,</i>		And then these following powders,	
<i>R. Rhabarb. Elect. &</i>		<i>R. Choice Rhubarb,</i>	
<i>Seminis Violarum, an.</i>	3 j.	Violet-seeds, an.	3 j.
<i>Rosarum rubrarum exungulatarum,</i>		Red roses cleans'd from their white bottoms,	
<i>Santalæ Citrini & Rubri,</i>		Sanders Yellow and Red,	
<i>Rasura Eboris,</i>		Shavings of Ivory,	
<i>Succi Glycyrrhizæ, an.</i>	3 vj.	Juice of Liquorice, an.	3 vj.
<i>Sem. 4. frig. mag. mund. an.</i>	3 j.	Four cold seeds cleans'd, an.	3 j.
<i>Quod Compositum sive Laxativum fieri po- terit, si Electuarii cuique libra adhuc Calenti, Diagridii subtiliter pulverati 3 lb permisceatur.</i>		Which may be made Compound or Lax- ative, if to every pound of the Ele- ctuary yet warm, you add half a dram of Diagridion finely pulveriz'd.	

The Dose of Rhubarb and Violet-seed was judiciously augmented, to render it a little more purgative. The seeds of Endive, Barberries and Purslane, were on purpose left out, as useless; as also the Gum-Tragacanth, which was only a Glue to the Electuary: The yellow Sanders was preferr'd before the white; as also the shavings of Ivory before Spodium, for the reasons already recited. The rest of the Ingredients were not chang'd, but their Dose only augmented, to the end the just proportions of Powder might be found in the Electuary, which must be thus prepar'd.

Having put the Prunes into an Earthen-glaz'd Pot, boil them over a soft fire in three pints of water, till they are very soft; then leave the Decoction in the pot: pass the Prunes through a Hair-Sieve reverse, to get the Pulp, the superfluous moisture whereof you must evaporate in a Dish over a soft fire, stirring it from time to time with a *Spatula*, till it be conveniently thick. In the mean time, prepare an ounce of Cassia, and an ounce of Tamarinds, as I have already directed, and mix them, and set them by with the Prunes: Then gently boil the Violet-seed bruiz'd in the reserv'd Decoction of Prunes, the Liquor whereof must be afterwards strain'd; and having added thereto two pound of good Sugar, boil them over a soft fire to the consistence of a thin Electuary. When it is half cold, mix first the Pulps, and then the Powders; and when the whole is well incorporated, and cold, put up the Electuary for use.

If you would prepare a Compound *Diaprunum*, and more Laxative, mingle half a dram of *Diagridion* finely powder'd with every pound of Electuary warm, and take care that the Union and mixture be very exactly made.

Simple *Diaprunum* is rarely prescrib'd, as being not purgative at all; but the Compound is us'd to purge cholerick Serosities: It is us'd in continu'd and intermitting Agues, that proceed from superfluity of choler; it is also prescrib'd in diseases of the Breast, the Kidneys, and Bladder; for it makes the passages slippery, and gently carries away the matters there detain'd, and tempers the heat of the parts where they were lodg'd. It is sometimes taken alone, sometimes mix'd with other Purgatives in Bolus, or dissolv'd in Medicines, or other proper Liquors. The Dose of the Laxative is from one Dram to five or six, and sometimes to an Ounce for strong Constitutions. The Simple *Diaprunum* is giv'n from two Drams to an Ounce, in Diseases that require not much Purgation.

Electuarium Diaphœnicum.

*R. Pulpa Dactylorum in Hydromelite cocto-
rum, per cribrum inversum trajecta & in-
spissata, &
Penediorum recenter paratorum, an.* lb ss.

Electuary of Dates.

*R. Pulp of Dates boil'd in Hydromel,
pass'd through a Sieve reverse, and
thick'nd, and
Penedice newly prepar'd, an.* lb ss.
Amygdalarum

<i>Amygdalarum dulcium exorticatarum,</i>		Sweet Almonds, the skins tak'n off,	
	℥ iij β.		℥ iij β.
<i>Turbith electi,</i>	℥ iij.	Chosen Turbith,	℥ iij.
<i>Diagrydii,</i>	℥ j β.	Diagrydion,	℥ j β.
<i>Zinziberis,</i>		Ginger,	
<i>Piperis Albi,</i>		White Pepper,	
<i>Macis,</i>		Mace,	
<i>Cinnamomi,</i>		Cinnamon,	
<i>Foliorum Ruta siccorum,</i>		Dry-leaves of Rue,	
<i>Seminis Feniculi,</i>		Fennel-feed,	
<i>Dauci, an.</i>	℥ ij.	Wild Carrot-feed, an.	℥ ij.
<i>Mellis Despumati,</i>	℔ ij.	Clarifi'd-Honey,	℔ ij.

I know no ill qualitie in the Dates, that should oblige *Mesue* and his Disciples to seek for a Corrective, and to macerate them three days in Vinegar before you put them into the Electuary. This Correction is as needless as that of Coriander in Vinegar: But the Ancients have fallen into many such Errours, for want of understanding the parts that compose mixt Bodies: But our Moderns are become more Judicious. *Fernelius* was the first that rejected this Maceration, and directed the boiling them in Hydromel; which others induc'd by reason of sense imitated. The other Medicaments are well chosen, and well proportion'd in the Receipt which *Fernelius* has given of this Electuary.

Having cleans'd the Dates from their inward skin and stones, weigh out about seven Ounces; and having cut or bruis'd them in a Marble-Mortar, boil them over a gentle fire in a glaz'd Earthen-pot in two pints of Hydromel, till they are sufficiently tender: then beat them in a Marble-Mortar with a Wood'n-Pestle, and pass the Pulp through a Hair-sieve reverst, and set it aside. Peel off the Almond-skins with the point of a Knife: Pulverize together, in a great Brass-Mortar, the Turbith, Ginger, Pepper, Mace, Cinnamon, Leaves of Rue, the Fennel, and wild Carrot-feed, mixing therewith as many peel'd Almonds as the Powder will bear, without growing too fat. The Scammonie must be powder'd apart in the same Mortar, mixing some Almonds with it. Sift both the Powders through a Silk-Sieve; and having well mix'd them, set them aside. Those Almonds that remain'd must be beaten in a Marble-Mortar with the Dates, and pass'd through the same Sieve: Then take two pints of Honey clarifi'd and boil'd to the consistence of a soft Electuary, the Pennets and the decoction of Dates, and boil them together over a gentle fire, to the consistence mention'd; and when it is half cold, mix the Pulps with it by degrees. You may also set the whole over a very soft fire, and stirring it gently with a Wood'n-Pestle, evaporate the superfluous moisture; then taking it off the fire, mix the Powders by degrees, as before.

This *Diaphoretic* purges alike both Flegm and Cholerick Humours: It is useful in continu'd and intermitting Agues; as also against pains in the Stomach that proceed from abundance of Humours. It is very proper to carry away Hydropical Humours, and the Serosities which cause the *Sciatica*, Rhumatismes, and desfluxions upon the Eyes, upon the Teeth, and upon other parts. It may be taken in Bolus, or dissolv'd in Liquors, or mix'd with other Remedies. The Dose is from one Dram to half an Ounce, and sometimes to a whole Ounce for strong Constitutions.

Benedicta Laxativa.

℞. Turbith Electi,	
<i>Radiciſ Esule minoris aceto preparata, an.</i>	3 x.
<i>Hermodytylorum,</i>	
<i>Diagrydii,</i>	
<i>Rosarum Rubrarum, an.</i>	3 vj.
<i>Caryophyllorum,</i>	
<i>Spica Nardi,</i>	
<i>Zinziberis,</i>	
<i>Croci,</i>	
<i>Macro-Piperis,</i>	

The Blessed Laxative.

℞. Chosen Turbith,	
Roots of Pine-spurge prepar'd with Vinegar, an.	3 x.
<i>Hermodytyles,</i>	
<i>Diagrydion,</i>	
<i>Red Roses, an.</i>	3 vj.
Cloves,	
Spikenard,	
Ginger,	
Saffron,	
Long Pepper,	

Y

Anomi;

Amomi,
Cardamomi minoris,
Seminum Apii,
Petroselin,
Carui,
Feniculi,
Asparagi,
Rufci,
Saxifragiæ,
Miliæ solis,
Sal Gemmæ,
Galangæ,
Macis, an.
Mellis opt. despumat & costi,

℥ j.
 ℥ ij ℥.

Amomum,
Lesser Cardamom,
 Seeds of Smallage,
 Parsley,
 Caraway,
 Fennel,
 Asparagus,
 Butchers-broom,
 Saxifrage,
 Gromel,
Sal Gemmæ,
Galanga,
Mace, an.
 The best Honey despumated and boild,
 ℥ ij ℥.

Make an Electuary.

Though the finalness of the Root of Pine-spurge may dishearten Apothecaries that complain of their time and pains, it is however to be preferr'd before the Roots of any of the other Spurges, especially the bigger, whose ill qualities are publish'd by *Mesue*, and other Authors. The use which I have made all my life, and which I have seen made with good success for this Composition, and the frequent experience and advantage I have made of the Extract drawn from this Plant, without adding any Corrective, confirm me in the Opinion of not imploying any other Root; but that of Pine-spurge.

And though I find no necessity of preparing the Root with Vinegar, yet out of Reverence to Antiquity, I think that after you have well wash'd and cleans'd these little Roots, instead of steeping them 24 hours in Vinegar, as some do, it will be enough to sprinkle them only, so much as will serve to moisten them; for should they be soak'd in Vinegar, their Milky Juice, wherein resides their chiefest vertue, being thereby dissolv'd, there would only remain the Terrestrial and unprofitable part: But observing my Method, the Roots being impregnated with the vertue of the Vinegar, will preserve all their good-qualities.

They that consider how little ten drams of Powder'd-Sugar will advantage this Composition, will think it but reasonable to leave it quite out, and approve the Prescription of two pound of despumated Honey, instead of a pound and a half; in regard that there being no Liquor prescrib'd in this Electuary, a pound and a half of Honey will not be enough for the quantity and driness of the Powders.

Pulverize all the Ingredients together in a large Brass Mortar, beginning with those which are hardest, and pierce them through a Silk-sieve, but beat and sift the Scammony apart, and mingle it afterwards with the Powders: Then take two pound of fair Honey clarifi'd, and boild to the consistence of a soft Electuary; and having heated it a little, incorporate the Powders with it, as already directed, and when the Composition is cold, put it up.

The *Blessed Laxative* purges Flegme and Serosities, but particularly those of the Joynts. It is also very much recommended to carry off the impurities of the Reins and Bladder, as also of the Matrix. The Dose, and manner of taking, is very near the same with that of *Diaphænicon*, but it is more commonly us'd in Clysters, then tak'n inwardly.

Electuarium Caryo-Costinum.

R. Costi,
Caryophyllorum,
Zinziberis,
Cumini, an.
Diagrydii,
Hermodactylorum, an.
Mellis opt. despumat.

℥ ij.

℥ ℥.

℥ viij.

Electuary of Cloves and Costus.

R. Costus,
 Cloves,
 Ginger,
 Cumin, *an.*
 Diagrydium,
 Hermodactyles, *an.*
 Honey despumated,

℥ ij.

℥ ℥.

℥ viij.

In most Dispensatories, we meet not with above six ounces of Honey prescrib'd, with

with an equal proportion of Powder: But because this Composition is not much us'd, because all the Ingredients of the Powders are heating and unpleasant, and for that the whole becomes dry if long kept, it was thought convenient to augment the Dose of Honey to a fourth part: And as for the Wine, because they that prescribe it would have it boil and consume with the Honey, you cannot think that any thing else will remain but the stegmatic and terrestrial part. So that it is better to leave it quite out; since it suffices to take very pure Honey, boil it a little, and scum it off the fire; and when it is half cold, to incorporate the Powders with it, observing the same Rules as for other soft Electuaries.

This Electuary is proper to purge Cholerick and Melancholic Serosities. It is us'd in Cachexies, in Maladies that proceed from Viscosity of Humours: It opens Obstructions, and dissolves Tumours in the Bowels: It is often us'd to purge the Gouty, especially when the Humour of the Gout is cold. The Dose is from two drams to half an ounce in Bolus, or dissolv'd in proper Liquors.

Confectio Hamech Correcta.

R. Polypodii quercini contusi,
Passularum mundatarum, &
Prunorum Damascenorum, an. ʒ iiij.
Coquantur ex arte in seri lactis vac-
cini lb xij. In decocto percolato, & calido in-
funde super calidos Cineres per horas 24.

Mirobalanorum Citrinorum,

Cebularum,

Indorum contus.

Seminis Violarum contus.

Coloquintidis minutim incis.

Agarici contus. &

Foliorum Senna mundat. an. ʒ ij

Foliorum Absinthii, &

Thymi, an. ʒ j.

Rosarum Rubrarum,

Seminis Anisi, &

Feniculi, an. ʒ vj.

Bulliant deinde lento igne per semihoram; &
semirefrigerata, manibus diligenter fricentur,
colentur & fortiter exprimentur; Colatura
adde succi Fumariae depurati lb ij. Sacchari &
Mellis Norbomenis an. lb iij. & coque ad E-
lectuarii mollis consistentiam. His refrigeratis
adde,

Pulparum Cassia,

Tamarindorum &

Manna electi, an. ʒ iiij.

Illisque tandem permisce Pulveres sequen-
tes.

R. Rhei Electi,

Agarici albisimi,

Foliorum Senna mundatarum, &

Diagrydii, an. ʒ j.

Mirobalanorum Citrinorum,

Indorum,

Emblorum, &

Bellericorum,

Epithymi, &

Seminis Fumariae, an. ʒ j.

Cinnamomi,

Gingib. &

Seminis Anisi, an. ʒ iij.

Confection of Hamech Corrected.

R. Polypody of the Oak, bruise'd,
Raisins ston'd, and
Damask Prunes, an. ʒ iiij.

Boyl them in an Earthen-Pot, in twelve
pints of Whey made of Cows-milk. In the
strain'd and hot Decoction infuse over the
warm Embers for 24 hours,

Of Mirobalans yellow,

Cebula,

Indian bruise'd,

Violet-seed bruise'd,

Coloquintida shred small,

Agaric bruise'd,

Leaves of Senna cleans'd, an. ʒ ij.

Leaves of Wormwood, and

Thyme, an. ʒ j.

Red-Roses,

Anise-seed, and

Fennel-seed, an. ʒ vj.

Let them boyl over a soft Fire for half an
hour; and being half cold, rub them well
between your hands, then strain and press
them out hard. To the straining add lb ij.
of clarifi'd Juice of Fumitory, of Sugar
and Honey of Narbon, an. lb iij. and boyl them
to the consistence of a soft Electuary. To
these when they are half cold, add

Pulps of Cassia,

Tamarinds, and

Choice Manna, an. ʒ iiij.

To all which, lastly, add the following
Powders.

R. Pickt Rhubarb,

Whitest Agaric,

Leaves of Senna cleans'd,

Diagrydion, an. ʒ j.

Mirobalans yellow,

Indian,

Emblic, and

Belleric,

Epithyme, and

Seed of Fumitory, an. ʒ j.

Cinnamon,

Ginger, and

Anise-seed, an. ʒ iij.

The diversity of Receipts, the ill-proportion'd Quantities, the ill Method which the Ancients prescrib'd for this Composition, have a long time troubl'd the minds of the Apothecaries, especially those who believing it a Crime not to follow punctually the Traditions of their Ancestors, durst not make use of Understanding Physicians, who were able to prescribe any thing more just. For they might well believe, that a great number of Drugs, of a various substance and quality, requir'd diversity of Infusion, and boiling; and that various means and different times were to be made use of, to extract and impart their virtues to the Confection. They might also have consider'd, that it was impossible to continue an Infusion of Medicaments in Whey for five days, but that it must grow sowre, and receive a notable alteration. But they that will stick to this Receipt, and carefully observe the directions for preparation, will find that there is no Ingredient but what is good, and well proportion'd; and that the virtue of every one in particular, will not fail to shew it self in the Entire Composition.

Confectio Hamech purges Flegm, and both sorts of Choler, particularly salt and sharp Humours: For which reason it is prescrib'd for the cure of Scurfs, Itches, Erisipela's, Cankers, and corroding Ulcers; as also for scald Heads, and other Diseases caus'd by sharp and burning Humours. It is good against the Worms; as also in Venereal Distempers, and Quartan Agues. The excessive bitterness, is the reason that it is rather giv'n in Bolus, then dissolv'd in Liquors. The Dose is from a dram to half an ounce, and sometimes an ounce for strong Constitutions.

Hiera Picra Galeni.℞. *Cinnamomi* Elect.

Mastiches,

Asari,

Santali Citrini,

Crocī, an.

Aloes Succotrina,

Mellis despumat. & colli,

3vj.

3xij. ℔.

℔v 3viij.

Galen's Hiera Picra.

℞. Choice Cinnamon,

Mastich,

Asarobacca,

Yellow Saunders,

Saffron, an.

Aloes Succotrine,

Honey despumated and boil'd, ℔v.

3vj.

3xij. ℔.

3viij.

The high value which *Galen* put upon this Composition, and its extraordinary bitter taste, caus'd him to give it the Name of *Hiera Picra*, or *Holy Bitter*. You may either keep the Powder apart, or mix it with Honey, and reduce it to an Electuary.

Bruise the Saunders, Asarabacca, Cinnamon, and Spikenard, cleans'd and cut in a large Brass-Mortar, and sift them through a Silk-sieve. Beat the Saffron apart, having first dry'd it in a Paper before the fire: Beat the Aloes in a great Mortar, mixing with it some few drops of Oyl of sweet Almonds: Afterwards mix the Powders together, and incorporate them with the Honey moderately hot, and put it up when it is cold.

Some use but three times the weight of the Powders in Honey: But Experience tells us, that the dryness of the Powders requires more; besides, that the Honey qualifies the excess of the bitterness of the Composition.

This *Hiera* is very proper to loosen thick and viscous humours from the Stomach; to open the obstructions of the Liver, Spleen, Pancreas, and Mesentery: It keeps the Belly free, causes the Hemorrhoids to flow, provokes the Terms of Women, dissipates the vapours of the Matrix, and cleanses the impurities thereof. The dose is from half a dram to two drams: It is tak'n rather in Bolus, then dissolv'd in Liquors, by reason of its bitterness: It is us'd in Wind-expelling and Hysteric Glysters, from half an ounce to an ounce; and sometimes put into Suppositories, to render them more effectual.

Hiera Diacolocynthidos.℞. *Colocynthidos mundat.*

Agarici Elect.

Stachados Arabica,

Marrubii Abbi,

Chamadryos, an.

Opoponax,

3x.

Hiera of Coloquinth.

℞. Coloquinth cleans'd,

Choice Agaric,

Arabian Cassidony,

White Harehound,

Germander, an.

Opoponax,

3x.

Sagapen,

<i>Sagapen,</i>		<i>Sagapen,</i>	
<i>Seminis Petroselin,</i>		<i>Stone-Parley-seed,</i>	
<i>Radicis Aristolochia rotunda,</i>		<i>Root of round Birth-wort,</i>	
<i>Piperis Albi, an.</i>	3 v.	<i>White Pepper, an.</i>	3 v.
<i>Cinnamomi,</i>		<i>Cinnamon,</i>	
<i>Spica Nardi,</i>		<i>Spikenard,</i>	
<i>Myrrha,</i>		<i>Myrrh,</i>	
<i>Folii Indi,</i>		<i>Indian-leaf,</i>	
<i>Croci, an.</i>	3 β.	<i>Saffron, an.</i>	3 β.
<i>Mellis despumati & colli,</i>	℥ iij.	<i>Honey despumated and boil'd,</i>	℥ iij.

This *Hiera* takes its Name from the Coloquinth, which is the principal purging Ingredient, whose vertue is augmented by that of the Agaric, Opoponax, Sagapen, and Myrrh. The other Ingredients are put in chiefly to expel Wind, open Obstructions, and fortifie the parts against the violence of the Purgatives.

In the Composition of this *Hiera*, the Ancients are no more to be follow'd, then in that of Treacle; I mean, as to the dissolution of Opoponax and Sagapen in Wine, for the reasons already alledged: Nor is it necessary to reduce the Agaric or Coloquinth into Trochisques, under pretence of Correctives, of which there are enough in this Composition. It will be sufficient to beat and pass them among the other Ingredients through a Silk-sieve, beginning the Powder with the Birth-wort and Spikenard, which may be beaten sometime together, adding some part of the Gums; proceeding next with the Cinnamon, the Pulp of Coloquinth cut, the Agaric, adding to them also some part of the Gums, and then all the rest of the Drugs, and the remainder of the Gums. Beat them all into a very fine Powder, because of the Coloquinth, which would stick to the Stomach or Bowels if it were too big. The Powders must be incorporated with the warm Honey, as before.

There are great vertues attributed to this *Hiera*, of which the chief are to cure Epileptics, Mad-men, and those that are troubl'd with Vertigo's, and continual diseases of the Head. It is accounted an Excellent Remedy against Asthma's, Pleurifies, and for those that have lost their Voice: But there is some probability of its being too hot to be us'd in these distempers, unless their causes be judiciously consider'd. It is also made use of in Convulsions and Lethargies, to dissipate the pains of the Joynts and Kidneys, and those that are caus'd by Rheumatismes, and the Gout; to allwage pains of the Stomach, and qualifie the sowness that ingender there; to loosen and carry off melancholy humours, and to ease the pains of the Intestines and Matrix, caus'd by Slimy and tartarous humours. The dose, and manner of taking, are like those of *Hiera Picra*, as well to be tak'n inwardly, as to be dissolv'd in Glysters.

Electuarium de Pysillo Correctum.

<i>R. Polypodii quercini contus.</i>	℥ β.
<i>Passularum Damascusarum purgatarum,</i>	
<i>Foliorum Senna Orientalis mundatorum, &</i>	
<i>Seminis Violarum contus. an.</i>	3 iij.
<i>Epithymi, &</i>	
<i>Tartari Albi Montspeliensis contus. an.</i>	3 ij.

Coquantur in succorum depuratorum Apii,

<i>Borraginis,</i>	
<i>Buglossi,</i>	
<i>Endivie, &</i>	
<i>Fumitaria, an.</i>	℥ ij β.

Deinde coentur & exprimantur:

In majori parte colatura infundantur,
Seminis Pysylli integri 3 iij. & ex illis ex-
trahatur ex arte Mucilago, & serve-
tur,
Reliqua Desocti parte humectentur,

Electuary of Flea-wort Corrected.

<i>R. Polypody of the Oak bruise'd,</i>	℥ β.
<i>The fairest Raisins of the Sun ston'd,</i>	
<i>Leaves of Oriental Senna cleane'd, and</i>	
<i>Seed of Violets bruise'd, an.</i>	3 iij.
<i>Epithyme,</i>	
<i>White Tartar of Montpelier bruise'd, an.</i>	3 ij.

Boil them in the clarifi'd Juices of Pars-
ley,

<i>Borrage,</i>	
<i>Bugloss,</i>	
<i>Endive, and</i>	
<i>Fumitory, an.</i>	℥ ij β.

Then strain and press them:

In the greater part of the straining infuse
Of Flea-wort-seed whole 3 iij. and out
of these extract a Mucilage, and set
it aside,
With the other part of the Decoction
moisten,

Tamerindorum

Tamarindorum Oriental. ʒ x. & *Medulla librarum duarum Cassia Orientalis*, quorum pulpa extrahatur & igne lento inspissetur, ita ut uniuscujusque pulpa inspissata ʒ vij. super-sint.

Servato vero *Mucilago cum Sacchari opt.* ʒ iij. igne lento ad *Electuarii molliis consisten-tiam* coquatur, semique refrigeratis *Pulpa & Pulvis sequens permisceantur.*

℞. *Diagrydii elect.*
Rhabarbari opt. &
Seminis Violarum, an.
Rosarum Rubrarum,
Liqueritia mundat.
Santali Citrini, &
Rasura Eboris, an.
Sem. quat. frig. maj. mund.
Anisi,
Feniculi, &
Papaveris Albi, an.

ʒ iij.

ʒ ij.

ʒ j.

ʒ ij.

Of Oriental Tamarinds ʒ x. and the pulp of two pound of Cassia Oriental; the pulp of which is to be drawn out, and thick'nd with a slow Fire, so that of each pulp thus thickn'd ʒ vij. may remain.

Let the reserv'd Mucilage be boil'd to the consistence of a soft Electuary, over a soft Fire, with ʒ iij. of the best Sugar, and when they are half cold, add the Pulp and Powder following.

℞. Choice *Diagrydium,* ʒ iij.
Rhubard choice, and
Violet-seeds, an. ʒ ij.
Red-Roses,
Cleans'd Liquorice,
Yellow Sanders, and
Shavings of Ivory, an. ʒ j.
The four greater cold Seeds cleans'd,
Seeds of Anise,
Fennel, and
White Poppy, an. ʒ ij.

Electuary of *Flea-wort* is not mention'd in all Dispensatories, but those Descriptions which we meet with are very unlike, confus'd, irregular, ill proportion'd and intricate, some being swell'd with four Compositions of Trochiskes to no purpose. Which oblig'd Monsieur the Kings first Physician to prescribe and order this for the public good.

First, boyl the Tartar and Polypody well bruis'd in the clarifi'd Juices for an hour; afterwards the Raisins cut and Violet seeds bruis'd, a quarter of an hour, then boyl the Epithyme and Senna, for a quarter of an hour longer among all the rest. That done, infuse the *Flea-wort* seed in about two thirds of that Liquor four or five hours over a very soft Fire in a glaz'd Earthen Pipkin, stirring it often with a Wooden Spatula, the better to draw forth the Mucilages, and when they are sufficiently thick, strain them through a strong Cloth, and press out the Sediment. Moistnen the Pulp of Tamarinds and Cassia prescrib'd with the rest of the Decoction, and having beaten them in a Marble Mortar, pass them through a hair Sieve, to get the Pulps, which after you have mingl'd together, set them over a gentle Fire, and evaporate their superfluous moisture, stirring them often with a Spatula till they are sufficiently thick'nd. Then boyl the Mucilages and Sugar prescrib'd to the consistence mention'd. But look well to the viscus substance of the Mucilages, which will make you think the Sugar is boyl'd enough when it is not: Yet have a care of boyling it too much, lest you lose the lubricity of the Mucilages.

The preparation of the Powder is the same as before.

This Electuary is very proper to purge Choleric and Serous Humours: It is profitable in all sorts of Agues, against Discaies of the Head, and Vertigo's proceeding from Choleric Humours; it helps against the Jaundice, and all Discaies of the Liver and Spleen: It is to be taken as other Laxative Electuaries: but the Dose is less, viz. from a dram to half an ounce, because of the larger quantity of the Scammony.

Electuarium Anti-hydropicum D. D. D' AQUIN.

℞. *Rhabarbari elect.*
Foliorum Senna orient. mundatorum,
Seminis Genista,
Radixum Brionia,
Jalapa,
Mechoacan,
Scammonii,
Gummi Gutta, &

An Electuary against the Dropisie, of Monsieur D' AQUIN.

℞. Choice *Rhubarb,*
Leaves of Oriental Senna cleans'd,
Broom-foed,
Roots of Briony,
Jalap,
Mechoacan,
Scammony,
Gum Guttæ, or, Gutta Gamba, and
Trochiscorum

<i>Trochiscorum Alhandal, an.</i>	3j.	Trochisks of Alhandal, <i>an.</i>	3j.
<i>Extracti totius Esule,</i>		Extract of the whole Spurge,	
<i>Opopanax,</i>		Opopanax,	
<i>Sagapeni,</i>		Sagapen,	
<i>Ammoniaci, &</i>		Ammoniac,	
<i>Salis Martis, an.</i>	3vj.	Salt of Steel, <i>an.</i>	3vj.
<i>Elaterii,</i>	3ß.	Elaterium,	3ß.
<i>Succorum Radicis Ireos nostratis, &</i>		Juices of the Root of French Orrice,	
		and	
<i>Radicis Sambuci ad extracti mollioris con-</i>		Root of Elder thick'nd, to the confi-	
<i>sistentiam inspissatorum, an.</i>	1b j.	sistence of a soft Extract, <i>an.</i>	1b j.
<i>Extracti mollioris granorum Juniperi, &</i>		Soft Extract of Juniper-Berries, and	
<i>Syrupi de Rhamno Cathartico, an.</i>	1b j ß.	Syrup of Purging-Thorn, <i>an.</i>	1b j ß.

Evaporate the Juices of the Roots of Orrice and Elder over a soft fire, to the consistence mention'd: Pulverize in a large Brass-Mortar the Rhubarb, Jalap, Mechoacan, Briony, Broomseed, Trochisks of Alhandal, Senna, and the Gums all together; all but the Scammony, and *Gutta-gamba*, which must be pulveriz'd apart; and having mix'd all the Powders together, and added to them the Salt of Steel, moderately the Syrup of purging Thorn; then incorporate, first by degrees, the Juices and Extracts thick'nd, and after that the Powders, as before directed for soft Electuaries.

They that understand the particular virtues of the Ingredients of this Electuary, cannot but acknowledge that they are all judiciously chosen, and that they must be very effectual for the purposes for which this Electuary is design'd, which are for the cure of the Dropsie, and particularly that which is call'd *Ascites*, when the water is got between the Flesh and the Skin, where it will not fail to succeed, provided the Liver and Spleen, and other principal Bowels, are not too much corrupted; and that the Patient stick close to the Remedy. The dose of this Electuary is from one dram to half an Ounce: It may be dissolv'd in White-wine, or some opening Liquor, but the best way is to take it in Bolus, by reason of its bitterness.

Electuarium Diacarthami.

<i>Medulla seminis Carthami,</i>	
<i>Pulveris Diatragacanthi frigidi,</i>	
<i>Hermodactylorum, &</i>	
<i>Diagrydii, an.</i>	3j.
<i>Turbith Electi,</i>	3j ß.
<i>Zinziberis,</i>	3ß.
<i>Manna granulosa,</i>	3ij ß.
<i>Mellis Rosati colati, &</i>	
<i>Carnis Cydoniorum condita, an.</i>	3ij.
<i>Sacchari solidi in aqua soluti, & in Ele-</i>	
<i>ctuarium solidum cocti,</i>	3xx ij.

Electuary of Bastard-Saffron.

<i>The Pulp of Carthamus-seed,</i>	
<i>Powder of cold Diatragacanthum,</i>	
<i>Hermodactyls, and</i>	
<i>Diagrydion, an.</i>	3j.
<i>Choice Turbith,</i>	3j ß.
<i>Ginger,</i>	3ß.
<i>Manna in Grains,</i>	3ij ß.
<i>Honey of Roses strain'd, and</i>	
<i>The condited substance of Quinces, an.</i>	3ij.
<i>Sugar dissolv'd in water, and boil'd to</i>	
<i>the consistence of a solid Electuary,</i>	3xx ij.

This Receipt of *Diacarthanum* is somewhat different from those which are to be found in many Dispensatories; sometimes under the Name of *Arnoldus de Villa Nova*, *Nicholas the Florentine*, and sometimes without a Name; in some there is Sugar-Candy, but less Manna, less Scammony, and less fine Sugar; in others, no Sugar-Candy, but more Scammony, more Manna, and Sugar; in others, more Powder of Diatragacanth, less Carthamus-seed, less Ginger, and *Mel Rosatum*. Therefore I have here produc'd a Receipt, wherein the Sugar-Candy is omitted as useless, and the quantity of the Manna augmented, as also in some small measure that of the Sugar, to supply the defect of the Sugar-Candy, and to keep a due proportion with the Scammony, and other Ingredients.

Neither what Holy Writ delivers to us concerning *Manna*, white, sweet, and like Coriander-seed, which God rain'd down from Heaven to feed the *Israelites*, nor what we have spoken other-where of a certain sort of *Manna*, which being rais'd in Summer from the vapours of the Earth, and digested in the Air, is condens'd by the cold,

cold, and shews it self in certain hot Countries, before Sun-rise, upon Plants, Trees, Rocks, and upon the Earth it self, as in some parts of *Provence* and *Languedock*, and melts and disappears when heated by the Rays of the Sun, cannot convince me to be of the Opinion of those, who would have the Manna which we make use of, to be a Honey of the Air, or a kind of Dew, since Reason and Experience testify the contrary.

For if Manna were a Dew rais'd from the vapours of the Earth, and condens'd by the Cold, as they assure us, it would certainly melt, and be dissipated by heat, which our Manna does not, but rather condenses and dries in the Sun. Moreover, it would be certainly found upon all Plants, Trees, Rocks and Earths where-ever it were exhal'd, whereas it is only found upon the ordinary Ash, call'd in Latine, *Fraxinus*; and upon the wild Ash, in Latine, *Ornus*; and upon some of those Trees but very little, upon others none at all. Nor should we meet with such large Tears, nor so long, and some that shew the very print of the leaf upon which they grew. Nor should we find the leaves of Ash so often mix'd with it; nor could we keep it whole years together, as we often do upon occasion.

As little prevails with me what sundry Greek, Arabian, and Modern Authors have written, that the Manna which is brought to us in such quantities, grows in the Kingdom of *Naples*, and particularly in *Calabria*; and that it is a white, sweet juice or liquor, condens'd by the Beams of the Sun, and distils either voluntarily, or by Incision from the branches, boughs, and very leaves also of common and wild Ashes, before and during the Dog-days. And that the other Manna, less plentiful, grows about *Briancon* in the upper *Dauphinat*, distilling from the Trees of that Country; that both the one and the other Manna ceases not to distil, though you cover the Boughs with Linnen, or any other stuff: And that if Manna were a Honey of the Air or Dew, it were impossible to gather it, or to keep it without melting or dissipating, nor to gather it in the heat of the Sun, as they do that Manna which is brought to us: For all Manna of the Air that appears in the morning condens'd by the cold, vanishes when it feels the heat of the Sun.

Alcomarus, a Neapolitan Physitian, well insighted into these truths, has wrote largely and very much to the purpose upon this Subject, in a Treatise which he printed in the year 1561. whose Reasons are maintain'd by *Costeus* in his Commentaries upon *Mesue*.

Joseph Donzellus, a Neapolitan Physitian likewise, in his *Pharmacopœntial Theatre*, printed at *Naples* in the year 1667. confirms what *Alcomarus* has wrote before him, when he tells us, that Manna is a juice which distils from the Ash, condens'd by the heat and benign temper of the Air, and that it ought to be rank'd in the number of Gums that distil from Trees, dissolve in moisture, and coagulate with heat, being far different from the Arabian Manna, which is only a Dew that melts with heat: And describing that Manna that grows in *Calabria*, which is that which we every day make use of; and discoursing with *Battista Ferrarius*, a Physitian of the Country, he speaks that which I thought fit here to Epitomize.

There are three sorts of Manna in *Calabria*; the first call'd *Manna di Corpo*, the second *Manna Forzata*, or *Forzatella*, and the third *Manna di Fronda*. These Manna's are no Dews, but a juice that distils from the common Ashes, call'd *Fraxini*, or the wild ones call'd *Orni*; these Manna's are gather'd in a hot settl'd season, when no Rain falls; and they begin to distil when the Sun enters into *Cancer*, which is about the twenty first of *June*. The first and fairest Manna issues forth voluntarily, from the body or biggest branches of the Tree, in a Chrystalline liquor, forming it self into Tears bigger or lesser, as the part of the Tree is more or less full of it. They are careful to gather this Manna the next day after it is distill'd forth; for in that time it hardens by little and little, and becomes white; but if it should rain in the night, or any Mists should rise, it would melt and come to nothing. They begin to take it off from the bark of the Tree with a thin-pointed knife by Sun-rise, putting it, as they gather it, into glaz'd Earthen-pots; then spreading it upon white paper, they expose it to the Sun, till it cease to stick to the fingers, lest the Manna should dissolve by the means of any superfluous moisture, and lose its whiteness. This gathering continues from the twenty first of *June*, till the latter end of *July*.

The second call'd *Forzata*, or *forc'd*, is drawn forth in the Month of *August*, when the first Manna ceases to flow voluntarily; for the Country-people wound the bark of the Trunks, to the wood it self, with very sharp Instruments; and so from Noon, till ten a Clock at Night, you shall see the Manna flow from those wounds, so that you shall sometimes see it clotted together at the bottom of the Tree like little sticks of Wax: They never gather it till the next day after Incision. This is not so well esteem'd, as being

being more yellow then the first, and apt to turn brown, being kept any time, though nothing less purgative.

The third is call'd *Manna di Fronda*, or of the *Leaves*, flowing voluntarily from the leaves of the Ash like little drops of water, as appears like a kind of sweat upon the nervous part of the Leaf, during the heat of the day, and extends it self all over the Leaf, though the drops are bigger at the stalk, then at the end, or point. These drops harden, and become white in the Sun, and are somewhat bigger then Grains of Wheat. In *August* the great leaves of the Ash will be so loaden with these drops, as if they were cover'd with Snow: They do not labour so much to gather this Manna, because of the difficulty to separate it from the Leaves, though it be no less purgative then the other.

These Truths are confirm'd also by Mr. *John Ray*, of the Royal Society of *London*, in his Catalogue of English Plants, printed at *London* in the year 1670.

Besides all these, Mounseur *Nicholas Marchand*, a Member of the Royal Academy of Sciences, Herbalist to the King, and Director of the Plantation of the Garden-Royal, has confirm'd all these things to me, as one that has been an Eye-witness, to the end I might be able to speak with more assurance. I have also understood the same thing from several other persons who have liv'd several years in *Calabria*, that there is no reason in the world to question it.

The Diagrydion must be bruis'd apart, mixing some of the Carthamus-seeds with it, and pass'd through a Silk-sieve. The Turbith, Hermodactils, Ginger, and the rest of the Carthamus, must be beaten together in a large Brass-Mortar; and being pass'd through a Silk-sieve, must be mingl'd with the Diagrydion and Diatrageanth newly prepar'd. Beat the condited substance of the Quinces in a Marble-Mortar with a Wooden-pestle; and having pass'd it through a Hair-sieve revers'd, mix it with the *Mel-Rosatum*, and Manna; then having dissolv'd the Sugar in six ounces of water, and boil'd it to the consistency mention'd, put the Honey, the Pulp of Quinces, and the Manna into it; and having giv'n them a soft boiling, to evaporate the superfluous moisture of the Honey of Roses, and Quinces, take them off the fire, and stir the whole with a Wooden-pestle; and when it begins to coagulate, mingle the powders as exactly as you can; and when all is incorporated, take out the Pestle: Then having separated the Mass in the Basin, take it in your hands, oyl'd before with Oyl of Sweet-Almonds, and spread it upon a sheet of white paper a little oyl'd, and make a kind of a Cake about half the thickness of your little finger, which you shall cut into Tablets of half an ounce a-piece; and when they are cold, put them up in a Box.

These Tablets are proper to purge Flegm, and a yellow Choler; for which reason they are useful in Diseases that proceed from the abundance of those humours; as Palsies, Epilepsies, and most Diseases of the Brain; Rhumatismes, Gouts, and Quotidian Agues. They are to be taken in distill'd waters, or proper Decoctions. They may be also made up in Bolus, or eaten alone, or mingl'd with purgative Syrups. When they are given alone, the Dose is from two drams to six.

You may keep apart the Powder of this Electuary, and give it from half a dram to a dram, or a dram and a half.

Electuarium de Citro Solutivum.

<i>R. Foliorum Senna Orientalis mundatorum,</i>	
<i>Turbith electi,</i>	3vj.
<i>Corticis Citri Saccharo conditi,</i>	3v.
<i>Conserve florum Buglossi, &</i>	
<i>Violarum,</i>	
<i>Pulveris Diatrageanthi frig. &</i>	
<i>Diagrydii, an.</i>	3ß.
<i>Seminis Feniculi dulcis,</i>	3ij.
<i>Zinziberis,</i>	3ß.
<i>Sacchari opt. in aqua Buglossi soluti, & in</i>	
<i>Electuarium solidum cocti,</i>	3ix.

Solutive Electuary of Citron.

<i>R. Leaves of Oriental Senna cleans'd;</i>	
<i>Choice Turbith,</i>	3vj.
<i>Citron-rind condited with Sugar,</i>	3v.
<i>Conserve of Flowers of Bugloss, and</i>	
<i>Violets,</i>	
<i>Powder of cold Diatrageanth,</i>	
<i>Diagrydion, an.</i>	3ß.
<i>Sweet Fennel-seed,</i>	3ij.
<i>Ginger,</i>	3ß.
<i>Fine Sugar dissolv'd in Borage-water,</i>	
<i>and boil'd to a solid Electuary,</i>	3ix.

This Electuary bears the name of Citron-rind condited, though it afford it no purgative vertue, and only serves to strengthen the Stomach, and the Noble parts, during the Operation of the purgers. The Prescription differs in several Dispensatories; but this is approv'd as well by *DuRoi*, and the Compilers of the *Pharmacopæa Londinensis*, so that I thought it not convenient to alter it.

This Electuary may pass for an Universal Purger, for it purges flegm, and also both cholers, strengthening the parts withal: the Purgatives are sufficiently corrected, so that this Electuary is often given in Tertians, and half Tertians; to cleanse the Stomach from its impurities, to discharge the Hypochondriums, restore the Appetite, and a good habit of body, and to fortifie the bowels. The manner of taking and dose of this Electuary are very near alike.

Electuarium de Succo Violarum.

<i>R. Seminis Violarum, &</i>	
<i>Diagrydii, an.</i>	℥j.
<i>Liquoritia & Rosarum Rubrarum, an.</i>	℥℞.
<i>Semen quat. frig. maj. mundatorum, an.</i>	℥℞.
<i>Succi recentis Violarum,</i>	℥ix.
<i>Sacchari optimi,</i>	℔j℞.

Electuary of Juice of Violets.

<i>R. Violet-seeds, and</i>	
<i>Diagrydion, an.</i>	℥j.
<i>Liquorice and Red-roses, an.</i>	℥℞.
<i>The four greater cold seeds, an.</i>	℥℞.
<i>New juice of Violets,</i>	℥ix.
<i>Finest Sugar,</i>	℔j℞.

Pulverize the Violets, Liquorice, Red-roses, cold Seeds, and Diagrydion, as before: Dissolve the Sugar grossly powder'd in a Copper-Skillet tinn'd within, in nine ounces of Juice of Violets newly press'd out, and boil them together over a soft fire to the consistence of a solid Electuary: Then take the Posnet from the fire, gently stirring the Sugar, till it begins to coagulate, at which time incorporate the Powders with all the care and exactness that may be.

This Electuary is chiefly to purge such persons as have a nice and tender Breast, and subject to Inflammation: It is also proper for those whose Liver and Entrails are heated: For the Juice of Violets, assisted by the oyliness of the Seeds, qualifies the Acrimony and sharpness of the Diagrydion, and prevents it from heating the parts, while it carries away the ill humours: The dose and manner of taking, is much the same with that of *Diacarthumum*.

Electuarium de Succo Rosarum.

<i>R. Succi Rosarum depurati & Sacchari opt.</i>	
<i>an.</i>	℔j℞.
<i>Coquantur igne moderato in Electuarium solidum, cui semi-refrigerata permisce pulverem sequentem.</i>	

<i>R. Scammonii Elect.</i>	℥ix.
<i>Trium Santalorum, &</i>	
<i>Mastiches, an.</i>	℥iij.
<i>Subtiliter pulverizentur & Saccharo ex Arte permisceantur.</i>	

Electuary of Juice of Roses.

<i>R. Juice of Roses clarifi'd, and the finest</i>	
<i>Sugar, an.</i>	℔j℞.
<i>Boil them over a gentle fire to a solid Electuary; and when they are half cold, mingle the following Powder therewith.</i>	

<i>R. Chosen Scammony,</i>	℥ix.
<i>The three Sanders,</i>	
<i>Mastich, an.</i>	℥iij.
<i>Beat them to a very fine powder, and mix them according to Art.</i>	

The Prescription of this Electuary differs as much in most Electuaries as that of *Diacarthumum*; for some augment the Saunders, others the Scammony; others abate the Juice of Roses, others put in Spodium instead of Mastich, others prescribe Camphire, and every one pretends to Reason; but not to blame others, I believe this not to be inferiour to any of them.

You must be careful to have your Juice of Roses perfectly well clarifi'd; and having boil'd it as directed, take it from the fire, and stir it gently with a wooden-pebble till it begin to coagulate, at what time mix the Powders, as before.

This

This Electuary is chiefly recommended to purge cholerick humours; but that hinders not but that it may also purge other humours that may be mingled therewith. The dose and manner of taking this Electuary is the same with those of the precedent Electuaries.

I could have swell'd this Chapter with a great many more Electuaries, with which Dispensatories are full cramm'd. But believing that the instructions which I have giv'n may serve as a sufficient rule whereby to undertake and accomplish any other that may be prescrib'd, I thought fit to forbear, leaving every one to prepare such remedies, and to follow such directions as he likes best.

I might have added a Chapter of Junkets or Sweet-meets, call'd in Latin *Tragemata*, or *Bellaria*; but their consistence is almost the same with solid Electuaries, as also their foundation, which is Sugar. But because they are not much us'd in Physic and may be prepar'd at any time with proper Powders, Sugar, and Mucilages of Gum-Tragacanth, I am unwilling to enlarge too far.

CHAP. XXI.

Of Trochisks.

IN imitation of the Greeks, all those who have written of Pharmacy, have giv'n the name of Trochisks to a dry Composition, the chief Ingredients whereof are usually reduc'd to a fine powder, then being incorporated with some liquor, are made into a mass, of which are form'd certain small Cakes, to which you may give what Figure you please, being then to be dry'd out of the Sun, or at distance from the Fire. However you may add several pulps and viscous matters to the composition of Trochisks, but there is no reducing those substances into a mass, or to the shape and driness of Trochisks, unless you mix powders very finely beaten among them. They are also call'd Pastils, Rolls, Cakes, and Lozenges. Trochisks were invented, as well to preserve a long time the virtue of certain Medicaments, as to unite together the vertue of several. To which purpose having finely powder'd the Ingredients which are to be powder'd, they are to be incorporated with some juice, syrup, or other viscous Liquor, to make thereof a solid paste, out of which are form'd little Trochisks, flat, round, triangular, square, long or otherwise; which being spread upon paper, and dry'd out of the Sun, and at a distance from the Fire, to the end they may be dry'd in all parts alike, may be put up in Boxes or Pots for use.

Formerly a great number of Trochisks were prepar'd, as appears by the ancient Dispensatories which are full of them. But because the Moderns have rejected so great a number, we thought it convenient to satisfy our selves with those which are only in use.

Trochisks are prepar'd for several purposes, some to close and bind, some to fortifie the parts, some to cut and purge, some to cleanse and incrustate; whence it comes to pass that they are prescrib'd in all Diseases of the Breast and Lungs. Others for Diseases of the Eyes, and were call'd *Sief* by the Arabians. Others, which are particularly call'd by the name of *Pastils*, were invented for Perfumes, which are usually compos'd of odoriferous Gums, mix'd with Woods, or other Aromatic Drugs pulveriz'd and incorporated with Mucilages of Gum-Tragacanth.

Trochisci de Agarico;

R. Zinziberis albi contus. ʒij.
Vini albi, ʒiij.
Infundantur frigide horis viginti quatuor, &
coquantur: postmodum,

R. Agarici electi in pulverem redacti, lbss.

Prædicto liquore humectetur & ex illa singan-
tur Trochisci in umbra siccandi.

Trochisks of Agaric.

R. White Ginger bruis'd, ʒij.
White-Wine, ʒiij.

Let them infuse cold for twenty four hours, then strain them: afterwards.

R. Choice Agaric reduc'd into Powder, lbss.

Moisten it with the foresaid Liquor, and make of it Trochisks to be dry'd in the shade.

To prepare these Trochisks right and to have them white, you must stay for fair warm and dry weather, and be careful to pick your Agaric very clean and very white through all its substance, very light and very brittle, & to reduce it into powder with a very small Rasp: In the mean while infuse coldly two drams of white Ginger, very well cleans'd from its Bark, and well bruise'd, for four and twenty hours in four ounces of white Wine; then having strain'd the Infusion, moisten the Powder of Agaric with the Infusion, and beating them together in a Marble-Mortar with a wooden-Pestle, reduce it into a solid mass; and make of it little Trochisks, which you must spread upon white paper in a hair-Sieve revers'd, and dry in the shade in the open Air.

They that undertake to prepare these Trochisks right, fail in the preparation; for instead of preserving their white colour, they so order it that they are of a very dark colour, which happens either because their Agaric is not well chosen, or because the Ginger was infus'd warm, or because the paste was too moist, or because the Trochisks were expos'd to the Sun or Fire.

Some there are that add to these Trochisks, *Sal gemma* as an incentive, and Ginger in substance as a corrective; and make use of simple Oxymel instead of an Infusion of Ginger to reduce Agaric into paste. This preparation might be admitted, if you could preserve the white colour of the Agaric, which is very much to be regarded.

The principal use of Trochisks of Agaric, is to purge Phlegme, though at the same time they also purge other humours, when they are mix'd with it. They cut and loosen viscous and tenacious humours, and open obstructions of all the Bowels. They are prescrib'd to carry off old pains in the Head, to heal distempers in the Eyes, Ears and Teeth; to cleanse the Stomach, Reins, Liver, Spleen and Matrix; to kill Worms; and to ease the pains of Asthmatics, and those whose viscous matters stop the Conduits of Respiration. Their dose is from one scruple to a dram. They are seldom giv'n alone, being more frequently prescrib'd in infusion than in substance; unless when they are to be put into Pills or Opiates, or other suck-like Compositions.

Trochisci Alhandal.

Alhandal Trochisks.

R. Pulpa Colocythidis electa & mundata quantum libuerit, forcipe minutim incide, guttis aliquot Olei Amygdalarum dulcium irrota & in subtilem pulverem redige. Ex pulvere Mucilage Gummi Tragacanthi excepto fac Massam, ex Massa Trochiscos in umbra siccat. Siccis iterum subtiliter tere, nova Gummi Tragacanthi mucilage excipe, nova Trochiscos forge in umbra sicca & ad usum serva.

R. The choicest pulp of Coloquintida, cleans'd as much as is fit, cut it very small with a pair of Scissors, moisten it with some few drops of Oyl of sweet Almonds and reduce it into fine powder. Of the powder make a Mass with Mucilage of Gum-Tragacanth, of the Mass Trochisks to be dry'd in the shade. When they are dry powder them again, and mix them with more Mucilage of Tragacanth: Make new Trochisks; dry them in the shade, and keep them for use.

Choose out the Apples of Coloquintid very white and well grown; and throwing away the grains cut the pulp very small, and having slightly moisten'd it with some drops of Oyl of sweet Almonds, bruise it in a Brass Mortar, and pass it through a Silk-Sieve. In the mean time pulverize one or two drams of Gum-Tragacanth very white, and infuse it upon hot Embers in five or six ounces of good Rose-water till it be altogether dissolv'd and reduc'd into a thick but soft Mucilage: Then put the powder of Coloquintid into a Marble-Mortar, and having moisten'd it with some part of the Mucilage beat it together with a wooden-Pestle, and reduce it to a mass somewhat solid, of which you shall make little Trochisks and dry them in the shade. When they are dry pulverize them again; and having pass'd the powder through a Silk-Sieve, incorporate it with new Mucilage of Gum-Tragacanth, for a mass to make Trochisks like the former; which are to be dry'd in the shade and put up for use.

Some add Gum Arabic and Bdellium to the Tragacanth, to extract Mucilages necessary for the composition of these Trochisks. But the principal intention of them that added them being only to stifle and abate the violent operation of the Coloquintid, and to separate all the small parts from it, by beating and rebounding it; and passing it twice through the sieve, the Gum-Tragacanth may very well suffice alone, and the two other Gums may be very well omitted.

These

These Trochisks purge flegme, and thick, and viscous humours, particularly of the Brain, Brest, Flesh, and Joynts; so that they are often prescrib'd in Epilepsies, Apoplexies, Vertigo's, and old diseases of the Head; against Asthma's, and Coughs, stoppage of the Lights, Sciatica's, Rhumatism, and all Maladies of the Joynts; but particularly against Dropsies, especially that call'd Ascites, Colicks caus'd by viscous and tenacious humours. Their excessive bitterness is the reason that they are never prescrib'd but in *Bolus*. Their violent operation also causes them to be seldom prescrib'd, but only to be mix'd with gentle Medicines. However the infusion of these Trochisks is given alone, made in white Wine for those that cannot endure the bitterness of the taste; and it succeeds very well. The usual dose is a scruple of Trochisks bruis'd, infus'd in four ounces of white Wine, the liquor whereof must be drank pass'd through coarse paper, and the dose repeated three times for three several days. But when these Trochisks are given in their proper substance, the dose is from a grain to seven or eight, or at farthest ten for very strong Constitutions, and in extraordinary Diseases; especially in those where nature is over-burthen'd and is not able to help her self.

Trochisks of Alhandal are put into several compositions, especially Pills; and they may be us'd where-ever Coloquinth is prescrib'd in substance, and so much the rather, because the Coloquinth being there finely powder'd is less apt stick to the Stomach and Intestines.

Trochisci Bechici Albi.

R. Sacchari albillimi subtiliter puluerisat. lb. jß.

Amyli,

Ireos Florentia,

Liquoritia mundata subtilissime pulverat.

an.

Ambra Grisea,

Moschi Orientis, an.

3j.

gr. iiii.

white Trochisks against Coughs.

R. Finest white Sugar finely powder'd, lb. jß.

Amylum, or Starch of Wheat,

Florence Orrice,

Liquorice cleans'd finely powder'd, an.

Amber-greese,

Eastern Mosch, an.

3j.

gr. iiii.

Pulverize very finely a dram of Gum-Tragacanth very white, dissolve it upon hot Embers in five or six ounces of good Rose-water, and reduce it to a mucilage, and set it by. Choose out the best Liquorice, and scrape off the rind, so that nothing appear but what is very yellow; pulverize it very finely apart, as well as the Amydon or Amylum, the Florence Orrice, and the fine Sugar. Pulverize together the Musk and the Amber-greese, mixing therewith about two drams of Sugar-Candy to facilitate the division of the parts. Then mix all these powders in a Marble-Mortar, and having incorporated them with as much of the mucilage of Gum-Tragacanth as is requisite to reduce them into a paste somewhat solid, form it into Trochisks, or little sticks, to be dry'd in the shade and kept for your use.

Some call these Trochisks by the name of Juice of white Liquorice; the Receipt whereof is not to be found in the Dispensatories. Sometimes also they alter the Ingredients, mixing therewith Sugar-Candy, or Penidite; and increasing or abating the quantity of the rest.

These Trochisks are us'd against salt and sharp defluxions that fall upon the Brain and upon the Lungs. They give ease to them that are troubled with violent Coughs, or suffer any oppression upon their Lungs; they may be taken at any time, holding them in the Mouth till they melt. They are also good to preserve the Breath sweet and grateful to the smell.

Trochisci Bechici Nigri.

R. Succo, sive extracto Liquoritia inspissat.

3ix.

Pulveris Ireos Florentia,

Amyli, &

Liquoritia mundat. an.

Cinnamomi acutissimi,

Sacchari albillimi,

Candi, &

Penidiate pulveratorum, an.

3j.

3j.

3j.

3j.

3j.

Black Trochisks against Coughs.

R. Juice or Extract of Liquorice thick- en'd,

3ix.

Powder of Florence Orrice,

Wheat-Starch, and

Liquorice cleans'd, an.

Biting-Cinnamon,

Sugar refin'd,

Candy, and

Penidiate pulveriz'd,

of each,

3ij.

3j.

3j.

3j.

3j.

3j.

3j.

Make a solid Paste of all with Mucilage of Gum-Tragacanth, extracted with Hyssop-water, and form it into Trochisks to be dry'd in the shade.

These Trochisks are call'd black because of their dark colour. They are not so pleasing as the preceding. They that would prepare them well, should make use of Extract of Liquorice prepar'd as I shall direct in its proper place. But they that will not take that pains, must take good Liquorice, and having dissolv'd it in som Pectoral-water, and filter'd it, must evaporate it afterwards to the consistence of an Extract.

These Trochisks are much us'd in Diseases of the Lungs, especially where there is any occasion to cut and loosen Flegm, and to hasten expectoration: They are to be taken as the former, but less at a time.

You may add to the composition Eastern-Bole, Terra-Sigillata, and Poppy-seed, or Extract of Opium, if you would make them more fit to stop defluxions from the Brains upon the Lungs: and make them like to Trochisks of *Terra-Sigillata*, or *Karabe*. These Trochisks may be prepar'd at any time; and therefore it is better to prepare them often, then let them be spoyl'd.

Trochisci Albi Rhafis.

R. Cerussa aquâ Rosarum lota,	3 ijb.
Sarcocolla lacte muliebri nutrita & succata,	3 vj.
Anyli,	3 lb.
Gummi-Arabici, &	
Tragacanthi, an.	3 ij.
Camphora,	3 j.

white Trochisks of Rhafes.

R. White-lead wash'd in Rose-water,	3 ijb.
Sarcocol moisten'd with Womans-milk and dry'd,	3 vj.
Pounded Wheat-flowre	3 lb.
Gum-Arabie, and	
Tragacanth, an.	3 ij.
Camphire,	3 j.

Choose out good Ceruse of *Venice*, and bray it upon Porphyrie with Rose-water, as you grind Precious-stones; and when it is reduc'd into a Powder not to be felt, extend it upon White-paper and let it dry. Then beat the Sarcocol very fine, being moisten'd with Womans-milk, and having reduc'd it into a Paste, extend it and expose it to the Air to be there dry'd; then beat it and sieve it through a silk-sive. Beat the Gums apart in a brass-mortar hot, and pass the same through a silk-sieve. Pulverize also the Camphire apart, adding never so few drops of Spirit of Wine: then beat the Amylum and prepar'd Ceruse, and having mix'd them with the other Powders, pass the whole through a Silk-Sieve, and having put the Powder into a Marble-Mortar, moisten it with Rose-water, and having reduc'd it into a solid Paste, make thereof little Trochisks to be dry'd in the shade; and kept for use. But because these Trochisks being dry are almost as hard as a stone; by the conjunction of the caseous part of Womans-milk, and the Sarcocol with the dry-Ingredients that make the Powder; it will do better to keep the Powder when it is made, then to form it up into Trochisks; in regard it will easily keep so, and that it is an easie thing afterwards to put Rose-water or Womans-milk to it, when you have occasion to use it.

You may also moisten the Sarcocol with Rose-water; if you prepare the Powder in Winter, for then the Milk will grow sowre and corrupt before the Sarcocol be dry.

The Arabians call these Trochisks by the Name of *Sif*, and the Latins and French have given them the name of *Collyrium*, as being chiefly proper for Diseases of the Eyes, of which they qualifie the Inflammations, cleanse the Ulcers, and stop and dry up the defluxions. They are also us'd in Injections for Inflammations and Ulcers of the Ureters and Bladder, particularly in Gonorrheas. For which two sorts of uses the Powder is dissolv'd in distill'd waters, or in decoctions or other specific Liquors. The Dose is half a dram, or at most a dram of Trochisks or Powder to four ounces of Liquor: The Dose is also to be vary'd, when you mingle with it Turbith prepar'd, Salt of Saturn, Magnesia Opalina, Aloes, Vitriol, &c. according to the intent of the Physician.

Trochisci Alipi Molchate.

R. Labdani purissimi,	3 vij.
Resina Storacis,	3 lb.
Benjoni,	3 j.
Ligni Aloes,	3 ij.
Moschi Orientalis,	3 lb.

Odoriferous Musk Trochisks.

R. Of the purest Ladatum,	3 iij.
Gum-Storax,	3 lb.
Benjamin,	3 j.
Ligni Aloes,	3 ij.
Oriental-Musk,	3 lb.

The Lignum Aloes must be pounded apart in a great Brass-Mortar, and pass'd through a silk'n sieve. The Ambergriese must be also powder'd apart, mixing with it never so little Oyl of Nutmegs; and the musk, by mixing with it never so little Sugar, candy'd. It may be also ground with the powder of *Lignum Aloes*. Could you get *Ladanum* very pure, you might melt it in a great hot Brass-Mortar, as well as the purified Rosin of *Storax*, and the *Benjamin* if that were in Tears; and then there would be no need of Rose-water or mucilage of Gum Tragacanth, for these melted Gums would easily suffice to bind together the powder of Aloes, Musk and Ambergriese, and which is a Bitumen easie to melt. But the impurities of Ladanum and Benjamin oblige us to beat and sift them through a silk-Sieve, and to make use of some moist or viscous matter, to unite the whole mass for to make the Trochisks. Prepare the Rosin of *Storax* as I have directed before; and incorporate it with the other Ingredients pulveriz'd in a marble-mortar, heated before, using therein as much mucilage of Gum-Tragacanth as is necessary to reduce the whole into a gentle Paste, to make the Trochisks which are to be dry'd in the shade.

The name of *Alipia Moschata* was giv'n to these Trochisks, because of the mixture of odoriferous and musky Drugs in the composition. The Camphire prescrib'd in other Dispensatories is omitted; by reason that its displeasing smell would surmount the scent of all the other Ingredients. However it may be added in the preparation of these Trochisks, when they are for Women that do not love sweet smells.

These Trochisks are very much esteemed for their fragrancy. They are good in the sickness-time against the pestilential air. But they are more frequently us'd to strengthen the brain and the noble parts. They may be carry'd in a small Box with holes, or burnt upon a Coal like a perfume to perfume a Chamber, Linen or Cloaths. They may be also pulveriz'd and mix'd with Rose-water, or Orange-flower water, and pour'd upon a hot Chafing-dish to perfume Bed-chambers or Dining-rooms.

Trochisci Gallie Moschatæ.

Trochisks of Gallia Moschata.

R. *Ligni Aloes optimi*,
Ambra Grisea,
Oriental. Mosc.

3 v.
3 iij.
3 j.

R. The best Lignum Aloes,
Ambergriese,
Oriental Musk,

3 v.
3 iij.
3 j.

With mucilage of Gum-Tragacanth extracted with Rose-water, make up these Trochisks, and drye them in the shade.

The Ambergriese and Musk must be ground upon Porphyry; and the Lignum Aloes finely powder'd. But be careful to moist'n the ends of your Fingers, with never so little Oyl of sweet Almonds, when you make up the Trochisks, to make the Paste stiff, and the Trochisks little, that they may be soon dry, and lose as little as is possible of their scent and vertue.

These Trochisks are commended by all Authors to strength'n the Brain, the heart, the Stomach, and all the Bowels, to stay vomiting, to facilitate transpiration, and keep the breath sweet. They are to be held in the mouth, and there gently dissolv'd: or else pulveriz'd and put with Rose-water or Orange-flower water upon a Chafing-dish of dying Embers, to receive the Vapours, or to perfume Chambers, Linen or Cloaths. You may add to the Paste of these Trochisks some small quantity of Willow-Coal powder'd very fine, and form them into Bracelets or Beads, to be dry'd, strung, and worn, or else to be laid among Cloaths.

Trochisci de Karabe.

Trochisks of Carobs.

R. *Karabes*,
Cornu-cervi ussi,
Gummi Arabici,
Tragacanthi,
Acacie vera,
Hypocistidis,
Balaustiorum,
Masticis,
Coralli Rubri,

3 j.

R. Carobs,
Harts-horn burnt,
Gum Arabic,
Tragacanth,
True Acacia,
Undergrowth of Cytus,
Pomegranate Flowers,
Mastic,
Red Coral,

3 i.

Gummi

Gummi Lacca,
Sem. Papav. nigri, an.
Thuris,
Croci, an.
Extracti Opii,

℥viij.

3ij.

Gum-Lac,
Black Poppy-seed, an.
Frankincense,
Saffron, an.
Extract of Opium,

℥viij.

3ij.

Bruise the Pomegranate Flowers, the true Acacia, and the Undergrowth of *Cystus* in a great Brass-Mortar, if they be dry, with the Poppy-seed. Bray the red-Coral upon Porphyry, together with the Harts-horn burnt, and the Carobs, moistning them in water of Mouse-ear, Rupture-wort, or some astringent Water. Beat the Gum-Tragacanth in a Brass Mortar heated. Beat the Mastic, the Gum-Lac, the Frankincense and Saffron apart, and sift them through a silk-sieve, as you must do the rest of the Powders. Incorporate the Extract of Opium with about an Ounce of mucilage of Flea-wort, and having mix'd all the Powders therewith, beat them together in a great Mortar, adding as much mucilage as is requisite to reduce the whole into a solid paste, which is to be form'd into little Trochisks, and dry'd in the Sun.

These Trochisks are good against all internal fluxes of blood, and particularly against spitting of blood; for Ulcers in the Lungs, Dysenteries, and Cholicks. They are to be finely powder'd, and given in astringent Waters or Decoctions, at a distance from eating. The Dose is from a Scruple to a dram.

The Harts-horn burnt may pass well enough here, because there is nothing requir'd but the astringent quality which remains in the earthy part after ustion. The ustion of the Coral is altogether to be rejected, as not to be done without altering its good qualities: and the burning of the Poppy-seed is altogether erroneous, as destroying altogether the vertue of the seed.

Trochisci Gordonii.

℞. *Seminum quatuor frig. maj. mund.*

Papaveris Albi,
Malvarum,
Bombacis,
Portulacæ,
Cotoneorum,
Myrtilorum,

Gummi Arabici,
Tragacanthi,

Nucleorum Pineorum mund.

Pistaceorum,
Sacchari Crystallini, &
Penidiati,

Glycyrrhizæ mundæ.

Hordei mundæ.

Amygdalarum dulcium,

Mucilag. sem. Psylli, an.

Bole Armeniæ,

Lachrymarum sang. Draconis,

Rosæ Eboris,

Rosarum rubrarum, &

Myrrha electæ, an.

3ij.

3℥.

Trochisks of Gordonius.

℞. Four greater cold Seeds cleans'd,

White Poppy-seed,

Seeds of Mallows,

Cotton-tree,

Purslain,

Quinces,

Myrtles,

Gum-Arabic,

Tragacanth,

Pine-Kernels cleans'd,

Pistaches,

Crystall'd Sugar, and

Penidiate,

Liquorice scrap'd,

Barley cleans'd,

Sweet Almonds,

Mucilage of the seed of Fleawort, an. 3ij.

Bole Armeniac,

Tears of Dragons blood,

Shavings of Ivory,

Red Roses, and

Choice Myrrhe, an.

3℥.

Pulverize apart the Bole Armoniac and Dragons-blood in Tears; mingling with them as much of the cold Seeds as the powder will bear. Beat together in a great Brass-Mortar the shavings of Ivory, the Liquorice, the Parsley, the Myrtles, the Myrrhe, the red Roses, the Mallows, Quince, Purslain, Poppey, and Cotton-seeds; you may also mix the Gum-Arabic and Tragacanth together, and as much of the cold Seeds as the powder will bear, and having sifted them through a silk-Sieve, and the Sugar Candy and the powders pulveriz'd, then cut very small the Pine-Kernels, the Pistaches, and the Almonds with a Shoemakers Knife, then beat them in a Marble-Mortar with a wooden-Pestle, till the whole be hardly to be felt. Then mix all the powders, and incorporating them with the cold Seeds, the Almonds, the Pine-Kernels, and

and the Pistaches beaten, add of the Muscilage of Flea-wort and Hydromel, as much as will suffice to reduce them into a good Paste; of which when the Trochisks are made, dry them in the Sun. But in regard these Trochisks are not to be kept, by reason of the unctuous Seeds and Fruits that compound them, and are onely to be made when occasion requires; therefore the best way is not to make them into Trochisks, but to administer the moist Mass, when it is fully prepar'd.

Gordonius the Author of these Trochisks extols them for the cure of Ulcers in the Reins; and for those that piss Blood, as also for the Diabetes, the Strangury, Gonorrheas and Ulcers of the Bladder and Ureters. The Dose is from one Dram to two mix'd in Hydromel, in Milk, or in some proper distill'd-water, or Decoction. It is also used for Injections into the natural parts of men or women, mix'd in the same manner. These Trochisks are also proper for the most part of Diseases of the Breast, as well to stay Defluxions, as to qualifie their Acrimony.

Trochisci de Rhabarbaro.

<i>R. Rhabarbari optimi,</i>	℥ x.
<i>Amygdalarum amararum excorticatarum,</i>	℥ β.
<i>Rosarum rubrarum exungulatarum,</i>	℥ iij.
<i>Radicis Rubie Tinctorum,</i>	
<i>Spica Nardi,</i>	
<i>Absinthii Majoris,</i>	
<i>Asari,</i>	
<i>Seminis Apii, & Anisi, an.</i>	℥ j.

Trochisks of Rhubarb.

<i>R. The best Rhubarb,</i>	℥ x.
<i>Bitter Almonds peel'd,</i>	℥ β.
<i>Red Roses cleans'd,</i>	℥ iij.
<i>Root of Dyers-Madder,</i>	
<i>Spikenard,</i>	
<i>The bigger Wormwood,</i>	
<i>Asarabacca,</i>	
<i>Seeds of Parsley, and Anise, an.</i>	℥ j.

Take off the skins of the Almonds with the point of a Knife, beat them in a large Brass-Mortar with the Rhubarb, Madder, Asarabacca, Spikenard, Wormwood, Roses, Parsley, and Aniseeds, and sift the Powders through a Silk-sieve, and mingle them afterwards with Juice of Eupatorium or Agrimony depurated and reduc'd to the Consistence of Honey, beating the whole for some time together, to unite the Ingredients the better, and bring them into a kind of a solid Paste, and make it into little Trochisks; which must be dry'd in the shade, and so kept for use.

These Trochisks are us'd at the end of long sicknesses, especially the Jaundise, Dropsies, and Cachexies. It serves also for the cure of those that are troubl'd with Pains, Swellings, and Obstructions of the Liver, Spleen, and Mesentery. They are given in Powder in white-Wine, or in some other proper Liquor, from a Scruple to a Dram. They may be also mix'd in Tablets, Opiates, and Potions.

Trochisci de Capparibus.

<i>R. Corticis Radicum Capparum, & Seminis Agri Casti, an.</i>	℥ vj.
<i>Gummi Ammoniaci,</i>	℥ iij.
<i>Amygdalarum amararum mundatarum,</i>	
<i>Seminis Nigelle,</i>	
<i>Nasturtii,</i>	
<i>Summitatum Calamintha,</i>	
<i>Radicum Acori veri,</i>	
<i>Aristolochia Rotunda,</i>	
<i>Cyperus,</i>	
<i>Foliorum Ruta, & Scolopendrii siccorum, an.</i>	℥ ij.
<i>Succi Eupatorii ad mellaginem inspissati, q. s.</i>	in sif.

Trochisks of Capers.

<i>R. Of the Rind of Caper-Roots, and Seed of the Chaste Tree, an.</i>	℥ vj.
<i>Gum-Ammoniac,</i>	℥ iij.
<i>Bitter Almonds peel'd,</i>	
<i>Seed of Fennel Flower,</i>	
<i>Cresses,</i>	
<i>Tops of Calamint,</i>	
<i>Roots of true Acorus,</i>	
<i>Round Birthwort,</i>	
<i>Cyperus,</i>	
<i>Leaves of Rue, and Spleenwort dry'd, an.</i>	℥ ij.
<i>Juice of Agrimony, q. s.</i>	

Having press'd out and depurated the juice of Agrimony, boil it over a soft fire to the consistence of Honey. Then beat together in a great Brass-Mortar the Caper-Roots, the true Acorus, the Cyperus, the Birth-wort, the Seeds, the bitter Almonds, the Calamint, Rue and Spleen-wort, according to the method of Trituration, and sift them through a Silk-sieve. Then heat the Brass-Mortar and Pestle; and having melted the Gum-Armoniac, and mix'd it with some part of the juice of Agrimony, incorporate the Powders with it by degrees, adding as much juice of Spleen-wort as is necessary to make a paste solid enough to make up the Trochisks, which are to be dry'd in the shade and kept for use.

The Trochisks are proper to cut and attenuate thick and tartarous humours, and to open the obstructions of the Liver, Spleen, Pancreas, and Mesentery, as also to soften their hardnells, and those of all the lower part of the belly; and to dissipate the flatuosities of the Hypochondrium and Intestines. They are to be given in powder mix'd in convenient Liquors, or among other Medicins like Opiates or otherwise. Their Dose is from a Scruple to one Dram.

Trochisci de Myrrha.

<i>Rx. Myrrha Electa,</i>	
<i>Lupinorum Excorticorum, an.</i>	3v.
<i>Foliorum Ruta siccorum,</i>	
<i>Dittamni Cretici,</i>	
<i>Mentastri,</i>	
<i>Pulegii Regalis,</i>	
<i>Seminis Cumini,</i>	
<i>Radici Rubie Tinctorum,</i>	
<i>Assa Fetida,</i>	
<i>Sagapeni,</i>	
<i>Opoponacis, an.</i>	3ij.

Trochisks of Myrrh.

<i>Rx. Choice Myrrh.</i>	
<i>Lupin's shal'd, an.</i>	3v.
<i>Leaves of drye Rue,</i>	
<i>Cretan Dittany,</i>	
<i>Wild Mints,</i>	
<i>Penny-Royal,</i>	
<i>Cumin-Seed,</i>	
<i>Root of Madder,</i>	
<i>Assa-Fetida,</i>	
<i>Sagapene,</i>	
<i>Opoponax, an.</i>	3ij.

Beat all together the Lupines cleans'd from their Halls, the Madder-Roots, the Leaves of Rue, wild-Mint, Penny-Royal, Dittany, Cumin-Seed, and Myrrh. Chuse out the purest drops of Assa Fetida, Sagapene, and Opoponax, and melt them by degrees in a brazen-Mortar heated, mixing therewith about an Ounce of the juice of Mugwort, wherein the powders are to be incorporated, so that the whole may be reduced into a paste, fit to be made up in Trochisks; which must be dry'd in the shade and kept for use.

These Trochisks are highly recommended against the Retention of the Menstruums. For they subtilize the blood, and hinder the coagulation. They also cut thick and viscous matters that cause Obstructions, and by that means they open the passages of the Matrix. They bring away the After-birth and dead Child. They are to be powder'd and given in a Decoction of the Berries of Juniper, or some other Hysterical Plant. Their Dose is from one Scruple to a Dram. They may be also powder'd and incorporated with Oyl of Petroleum or Amber, and ty'd in a knot to be held to the Nose against Hysteric Vapours.

Trochisci Diarrhodon.

<i>Rx. Rosarum rubrarum recensium exangula-</i>	
<i>tarum,</i>	3j.
<i>Rasura Eboris,</i>	
<i>Santalii Citrini, &</i>	
<i>Rubri, &</i>	
<i>Radici Liquoritiæ mundat. an.</i>	3iij.
<i>Mastiches electa,</i>	3ij.
<i>Crocus,</i>	3j.
<i>Camphora,</i>	gr. xij.
<i>Aqua Rosarum, q. s.</i>	

Trochisks of Roses.

<i>Rx. New Red-Roses cleans'd from their</i>	
<i>bottoms,</i>	3j.
<i>Shavings of Ivory,</i>	
<i>Saunders Yellow, and</i>	
<i>Red, and</i>	
<i>Root of Liquorice cleans'd, an.</i>	3iij.
<i>Chosen Mastich,</i>	3ij.
<i>Crocus,</i>	3j.
<i>Camphire,</i>	gr. xij.
<i>Rose-water, q. s.</i>	

This

This Receipt is not inferiour to any that are to be met with in any Dispensatories, though the difference be great, as well in reference to the ingredients, as the quantities: Beat together in a great Brass-Mortar the shavings of Ivory, Sanders, and Liquorice, and sift them through a Silk-sieve: Triturate the Mastick and the Saffron severally apart, as also the Camphire, observing what I have formerly directed. Chuse out the large buds of fresh Red-roses, and having cut off the unglous part or bottoms with a pair of Scissars, beat them in a Marble-Mortar with a Wood'n-pestle, till they are almost impalpable; then mixing the Powders therewith, beat the whole for some time, adding as much Rose-water as is necessary, to make the Mass solid enough for the forming of little Trochisks to be dry'd in the Sun.

These Trochisks strength'n the Stomach very much, as also the Liver and Bowels: They dissipate the pains and old maladies thereof, and are giv'n with success in Dysenteries and Cholical Passions. Their dose and manner of taking are very little different from those of the Trochisks preceding.

Trochisci de Camphora.

<i>Rosarum Rubrarum mundatarum, &</i>	
<i>Manna Calabrina, an.</i>	3 ℥.
<i>Santalum Citrinum,</i>	
<i>Liquoritia mundata,</i>	
<i>Rasura Eboris, an.</i>	3 iij.
<i>Semin. quat. frig. maj. mundatarum,</i>	
<i>Gummi Arabici,</i>	
<i>Tragacanthi,</i>	
<i>Nardi Indica,</i>	
<i>Ligni Aloes,</i>	
<i>Croci, an.</i>	3 j.
<i>Camphora,</i>	3 ij.

Trochisks of Camphire.

<i>R. Red-Roses cleans'd, and</i>	
<i>Calabrian-Manna, an.</i>	3 ℥.
<i>Yellow-Saunders,</i>	
<i>Liquorice cleans'd,</i>	
<i>Shavings of Ivory, an.</i>	3 iij.
<i>The four greater cold seeds cleans'd,</i>	
<i>Gum-Arabic,</i>	
<i>Tragacanth,</i>	
<i>Indian-Spikenard,</i>	
<i>Lignum Aloes,</i>	
<i>Saffron, an.</i>	3 j.
<i>Camphire,</i>	3 ij.

Beat together in a great Marble-Mortar the Yellow-Saunders, Lignum-Aloes, Liquorice, shavings of Ivory, the Spikenard, the Red-Roses and Spikenard, and sift them through a Silk-sieve. Beat apart the Manna and Camphire, adding at last never so small a drop of Spirit of Wine. Make choice of Manna in Tears; and having beat it in a Marble-Mortar with a Wood'n-pestle, add thereto about an ounce of Muscilage of Flea-wort; and mixing the Powder therewith by degrees, and what is wanting of the Muscilage, beat the whole to a solid Paste, fit to make little Trochisks, and dry them in the shade.

These Trochisks are prescrib'd in Burning-Fevers, to quiet the boiling of the blood and choler, to moderate the heat of the stomach and liver, and to quench inordinate thirst. They are prevalent also against the Jaundice, Ptilic, and Hectic-Fevers. Their dose and manner of taking is the same with the former: They are also put into Hysterical Glysters, from one to two drams, pulveriz'd and mingl'd with proper Decoctions.

Trochisci Hedychroi.

<i>R. Mari,</i>	
<i>Amaraci,</i>	
<i>Aspalathi,</i>	
<i>Asari, an.</i>	3 ℥.
<i>Stoeonathi,</i>	
<i>Calami Aromatici,</i>	
<i>Coffi,</i>	
<i>Xylo-Balsami,</i>	
<i>Opobalsami,</i>	
<i>Cinnamomi, an.</i>	3 vj.
<i>Myrrha,</i>	
<i>Folii Indi,</i>	
<i>Nardi Indica,</i>	

Trochisks of Sweet Perfumes.

<i>R. Herb Mastich,</i>	
<i>Sweet Marjoram,</i>	
<i>Thorn-Bush,</i>	
<i>Assarabacca, an.</i>	3 ℥.
<i>Camels Hay,</i>	
<i>Aromatic Reed,</i>	
<i>Costus,</i>	
<i>Xylo-Balsamum,</i>	
<i>Opobalsamum,</i>	
<i>Cinnamon, an.</i>	3 vj.
<i>Myrrh,</i>	
<i>Indian-leaf,</i>	
<i>Indian-Spikenard,</i>	
A a 2	
	<i>Croci,</i>

<i>Croci,</i>		<i>Croci,</i>	
<i>Cassia Lignea, an.</i>	℥j ℞.	<i>Cassia-wood, an.</i>	℥j ℞.
<i>Amomi,</i>	℥iij.	<i>Amomum,</i>	℥iij.
<i>Mastiches electa,</i>	℥ij.	<i>Choice Mastich,</i>	℥ij.

Having well chosen and cleans'd all these Ingredients, beat them together in a Brass-Mortar; and having sifted the Powder through a Silk-sieve, incorporate them with good Malmsey, till the Past is become solid enough to make little Trochisks, which are to be dry'd in the shade.

Marum, or Herb Mastich, grows in certain Islands near Toulon in Provence, and is planted also in Gardens. This Plant is very much about the bigness of Thyme, which it resembles, having several little round branches, somewhat woody, cover'd with a kind of Hoary Down, toward the top especially: The leaves are green, somewhat inclining to white, very small, and pointed like the Head of a Pike: The tops are tufted like those of Lavender, full of little Purple-flowers very odoriferous: The tast of it is sharp and biting, and leaves a bitterness in the mouth: The flowry tops are only made use of in these Trochisks.

Aspalathus is the wood of a Thorn-tree, or Bush, ponderous, massive, and unctuous; somewhat sharp and bitter to the tast, of a purplish colour, and somewhat spotted; in vertues, tast, smell, and figure, much resembling Lignum-Aloes, but that Lignum Aloes is of a browner and duller colour: And indeed, when *Aspalathus* is not to be had, Lignum Aloes may be very well us'd in its stead. The newest *Calamus Aromaticus* is the best, in regard it is subject to rot if it be long kept.

These Trochisks are good to expel Venom, and for the cure of all those Diseases for which the Ancient Treacle is prescrib'd: They are to be taken and dos'd like other Theriacal Trochisks.

Trochisci Cyphos.

<i>R. Pulpa Uvarum Damascusarum,</i>	
<i>Terebinthina Chia, an.</i>	℥j.
<i>Myrrha electa,</i>	
<i>Schoenanthi, an.</i>	℥℞.
<i>Cinnamomi,</i>	℥iij.
<i>Calami Aromatici,</i>	
<i>Bdellii,</i>	
<i>Spice Nardi,</i>	
<i>Cassia Lignea,</i>	
<i>Cyperus,</i>	
<i>Granorum Juniperi, an.</i>	℥j.
<i>Aspalathi,</i>	gr. ʒ4.
<i>Mellis optimi Malvatico diluti tantillum.</i>	

Trochisks of Cyphi.

<i>R. Pulp of the fairest and largest Raisins,</i>	
<i>Chio-Turpentine, an.</i>	℥j.
<i>Choice Myrrh,</i>	
<i>Camels Hay, an.</i>	℥℞.
<i>Cinnamon,</i>	℥iij.
<i>Calamus Aromaticus,</i>	
<i>Bdellium,</i>	
<i>Spikenard,</i>	
<i>Cassia-wood,</i>	
<i>Cyperus,</i>	
<i>Juniper-Berries, an.</i>	℥j.
<i>Aspalathus,</i>	gr. ʒ4.
<i>Of the best Honey mix'd with Malmsey, never so little.</i>	

Reduce into very fine Powder, in a Brass-Mortar, the Myrrh and Bdellium among the Camels Hay, the Cinnamon, Acorus Verus, Spikenard, Cassia-wood, Cyperus, Juniper-berries, and Aspalathus, as also the Saffron, if you cannot beat it apart; and having separated the skins and the stones of the Raisins from the Pulp, pass it through a Hair-sieve revers'd, without any addition of Wine, or any other moisture. The Turpentine being of a consistence solid enough, needs not to be dry'd over the fire, but rather that way is to be avoided, for fear of dissipating its best parts, which are its Spiritous and Ethereal Oyl: Nor will there be any need of Honey or Oyl, since the Turpentine, and the Pulp of Raisins, will be sufficient to mix the Powders, if rightly order'd; and the Trochisks will be the better, and drier.

The vertues of these Trochisks are very like to those of Mithridate: And their dose is from one scruple to one dram, in some proper Liquor.

Trochisci Scillicitei.

℞. *Scilla pane prius involuta & in clibano*
cocta, ℥j.
Radiciſ Dittanni Albi ſubtiliter pulve-
rati, ʒviij.

Trochisks of Squills.

℞. Of Squills firſt wrapt in Dough, and
 bak'd in an Oven, ℥j.
 Root of white Dittany finely powder'd,
 ʒviij.

Chufe out well-grown, firm, weighty Squills, of a moderate bigneſs, tak'n out of the Earth when the leaves are paſt, and wrapping them up in a piece of Paſte made of Wheat-dough, about a finger thick, put them into a Bakers Oven among the Houſhold-bread, and leave them there till the Bread be bak'd; then draw them, and when they are cold, take them out of the Paſte, and peel off the red ſkins, which will be almoſt dry; and only reſerving the thin ſlices, throw away the Core, and the Root: Then weigh out the quantity of the ſlices preſcrib'd, and beat them in a Marble-Mortar with a Wooden-peſtle, mixing by degrees the Powder of the Root of Dittany ſifted through a Silk-ſieve; and having beaten the whole together, and reduc'd it into a Maſs, fit your Trochisks, make them up, and dry them in the open Air.

Wonder not that the Chiches which the Ancients made uſe of in theſe Trochisks are omitted, in regard they have not any good qualities to ſecond the vertue of the Squills, nor of any ingredients in the Treacle, for which theſe Trochisks are principally prepar'd: But the Dittany is well preſcrib'd in the room of them, as being not only fit to give a body to the Squills, but alſo to impart its cordial and Alexipharmacal vertue to the Trochisks, and conſequently to the Treacle.

Nor can I hold with *Sweller* who preſcribes the Juice or Pulp of Squills in the Treacle, inſtead of the Trochisks. For it is not to be thought that the baking of the Squills wrapt up in Dough, can cauſe any diſſipation of their vertue; in regard it is apparent, that they abound in ſuperfluous moiſture, which it is very convenient to abate, and that the baking is as it were a maturation of its parts, by which their Acrimony is manifeſtly carry'd off.

Whereas he ſays, it is a difficult thing to make Trochisks of eight ounces of Dittany, and twelve of Squills, by reaſon of their ſuperfluous moiſture; I can affirm, that I have ſeveral times experimented the contrary, and that they may be eaſily dry'd in the Air, without the help of Fire or Sun's heat.

As to the diminution of the ſubſtance of the Squills in drying, I confeſs with him, that it is great enough, but not ſo much as he would make us believe; for out of the twelve ounces of Squills, and eight of Dittany, there remains ten of Trochisks well dry'd: Nor is the vertue loſt, but concentr'd with that of the white Dittany. The white Squills are the beſt, if they can be had.

The uſe of the Trochisks is in Treacle; their vertue is Alexipharmacal, to which the Root of Dittany contributes very much; but their chiefeſt vertue is to cut and attenuate viſcous and tenacious humours: For which reaſon they are preſcrib'd with ſucceſs againſt Apoplexies, Epilepsies, and Diſeaſes proceeding from abundance of Flegm: They may be taken like other Trochisks.

Trochiſci Viperini.

℞. *Truncorum hepatum, & Cordum Viperi-*
norum in aere libero extra ſolis Radios ſic-
catorum quantum libuerit.

Trochisks of Vipers.

℞. Of the Trunks, Livers, and Hearts
 of Vipers dry'd in the op'n Air out of
 the Sun, as much as you think fit.

To prepare theſe Trochisks right, if the Winter have been mild, take up your Vipers at the end of April, or beginning of May, never minding the Sex; for the Males are as good as the Females, whatever the Ancients or Moderns have written, ſince they are moſt extraordinarily active, vigorous, and fleſhy; and in ſome reſpect they may be preferr'd before the Female which are full of Eggs, that ſuck and emacerate them. They alledge frequency of Coition, which is not to be heeded, as proceeding from an abundance of Spirits, and is a mark of the vigour and good Conſtitution of the Creature. Caſting therefore away the drooping Vipers, and ſuch whoſe Eggs are grown big, chuſe out thoſe that ſtir moſt, and are moſt vigorous; and without whipping

whipping or provoking them, cut off their heads close to their necks and their tails, close to the place where their Excrement comes out: Strip off their skins; and having tak'n out all their Entrails, except the Heart and Liver, dry them in the Air; and when they are dry, after you have cut them very small, beat them in a great Brazen-Mortar, and sift the Powder through a Silk-sieve. In the mean while, put a little Gum-Arabic powder'd into a large three ounces of excellent Malmsey, of which take a sufficient quantity to incorporate the Powder of Vipers; and then beating the whole together in a Marble-Mortar with a Wooden-pestle, reduce it to a uniform and solid Paste, fit to make Trochisks; upon which you may set your Seal, and then dry them in the shade, anoynting them afterwards with Balsom of *Pern*, to give them a pleasant scent.

The Trochisks thus prepar'd, may be kept much longer than the Powder, because that the dissolution of Gum-Arabic in Malmsey, renders the Trochisks compact, closes the Pores, and hinders the penetration of the Air, to which the Balsom contributes not a little.

These Trochisks are very prevalent against Poysons, particularly against the biting of Serpents, and all sorts of venomous Animals: They are often prescrib'd in malignant Fevers, and Epidemic diseases, and all such as proceed from the corruption of the blood: They are particularly prescrib'd for the Composition of Treacle, to which they serve for a Foundation, though the Vipers dry'd, with their Hearts and Livers may very well suffice, without the trouble of making Trochisks. Their dose is from half a scruple to half a dram, though you may give a dram to persons of a strong Constitution. They are tak'n in Wine, or in Cordial Waters, or Decoctions, or else mingl'd in Potions, Opiates, or other Remedies.

CHAP. XXII.

Of Pills.

Pills are so call'd from their round figure, like to that of little Balls. They are also call'd *Catapotia*, because they are usually swallow'd whole. They were invented to comply with those that could not swallow dissolv'd Medicines, or were only for a small dose; as also to be provided of a Remedy, that by staying long in the Stomach, might have time to draw off the bad humours from the remote parts. Pills are also made for several uses; some to purge, some to fortifie the Brain, Stomach, or some other part; sometimes for diseases of the Breast; sometimes they are compos'd of pain-allwaging, and sleep-procuring Medicines; sometimes of Hysterics, Openers, and Antinephriticks. Laxative Pills have usually Aloes for their Basis: As for Coloquinth, Scammony, Agaric, Turbith, Hermodactiles, Senna, Rhubarb, and other Laxatives, they are variously prescrib'd; as also several Gums and Spices, according to the prudence and intent of the Physitian. Anodynes, and sleep-procurers, have generally Opium for their Foundation, which is many times attended with ingredients that tend to the same end, but always of Aromatics proper to fortifie the Noble parts during the operation of the Pills. Aloes is also the Foundation of fortifying Pills.

The bitter and ill tast of Pills, and their unpleasing smell, forces us to cover them with Gold or Silver, to wrap them up in Sugar, or in Wafers, or in some sweet-Meat. They may be also made bigger or lesser, in compliance with the Patients desire.

There are several ways to make Pills, according to the variety and nature of the Ingredients that compose them. Hard and dry Ingredients are to be finely powder'd; fat Gums are to be dissolv'd and melted; Juices are to be deperated and thick'nd. The Mass is also variously made up; for sometimes you must incorporate the Medicaments pulveriz'd in a great heated Mortar, by beating them together without any addition of Liquor; and sometimes you must make use of Syrups, Honeys, Juices, or any other Liquor. The mass of all sorts of Pills ought to be beaten a good while in a great Brass-Mortar, to the end the Union of the Ingredients may be the better made: For which reason some have deriv'd the name of Pill from *Pila*, a Mortar, as if it were never to be beaten enough. Yet there are Pills prepar'd of Extracts that have no occasion to be beaten at all.

The Mass of Pills must not be so solid as that of Trochisks: For it ought to be of such a consistence that you may roll up the Pill with your Fingers, being anointed before with some Oyl to keep the Pills from sticking to them. All which things may be better understood by the particular Preparation of the Masses of Pills which follow.

Pilulæ de Hiera simplicis.

R. Cinnamomi electi,
Santalæ Citrini,
Asari,
Spica Nardi,
Croci,
Mastiches, an.
Aloes succotrina elect.

℥ iij.
℥ L.

Simple Hiera-Pills.

R. Choice Cinnamon,
Yellow Saunders,
Asarabacca,
Spikenard,
Saffron,
Mastich, an.
Aoes succotrine,

℥ iij.
℥ L.

Beat in a great Brass-Mortar the Saunders, Spikenard cleans'd and cut, the Asarabacca and Cinnamon. Triturate the Mastich apart, mixing therewith never so small a drop of water. Beat the Saffron also apart, being dryed before: unless you think it better to triturate it in a small Brass-Mortar heated, where it will dry at the same time. Make choice of the purest Aloes succotrine, of a good scent, shining, transparent and of a purplish colour; and mixing with it some few drops of Oyl of sweet-Almonds, beat it to powder in a large Brass-mortar heated, and sift it through a Silk-sieve, as you must all the rest of the powders, which must be well mix'd together; and having put them into a large Brass-mortar heated, incorporate them with as much *Mel Rosatum* as is requisite to reduce the whole into a mass indifferently solid; which must be beaten in a Brass-mortar heated for a good while, till you perceive that all the Medicaments are exactly mix'd. After which having taken the mass out of the Mortar, make it into a kind of a round Loaf, a little high, and lay it two or three days in the air; then wrapping it up in a Skin a little oyl'd, keep the mass for use. When you have occasion for it, make the Pills of what bigness you please, as the Patient desires; anointing your Fingers with Oyl of sweet-Almonds, when you roll up the Pills. Then roll them up in Leaf-gold or Silver, in powder, Wafers or otherwise.

These Pills purge gently cholerick and flegmatic humours of the Stomach and Intestines. They keep the Belly open, and help the retention of the Menstruums. Their Dose is from a Scruple to half a Dram: though you may give a Dram at a time, and more, if you desire they should work more strongly. But because they ought to work slow and moderately, and are to be repeated more then once, the best way is to take the lesser Dose. They are taken just before meals, and are therefore call'd the *Gormandizing Pills*. You may also take them rising, or going to Bed, or at any hour.

Pilulæ de Hiera cum Agarico.

R. Specierum Hiera simplicis jam præscriptæ,
Agaric. Trochiscati,

℥ jß.
℥ jß.

Hiera Pills with Agaric.

R. The Powders of simple Hiera already prescribed,
Agaric Trochiscated,

℥ jß.
℥ jß.

When you have prepar'd the Powder appointed for the last Pills, it is but mixing half an Ounce of Trochisks of Agaric with an Ounce and an half of the same Powder, observing the same Preparation.

These Pills work more strongly then the simple Pills, as well in cutting the Humours, as in drawing from the remote parts. For while they cut and loosen the thick Flegm from the Stomach, they also draw the same from the Head, and carry it downward. You may take these Pills like the former just before Meals in a small Dose. But it is better to augment the Dose from one Dram to four Scruples, and take them rising, or going to Bed a good while after Supper, when there is a necessity of an entire Purgation.

Pilulæ de Agarico,

<i>Rx. Agarici Albissimi,</i>	
<i>Turbith Electæ,</i>	
<i>Specierum Hieræ Simplicis, an.</i>	3℔.
<i>Trochiscorum Alhandal,</i>	
<i>Sarcocollæ, an.</i>	3 ij.
<i>Radici Ireos,</i>	
<i>Foliorum Præssii Albi,</i>	
<i>Myrrha Electæ, an.</i>	3 j.

Agaric Pills.

<i>Rx. Of the whitest Agaric,</i>	
<i>Choice Turbith,</i>	
<i>Powders of Simple Hieræ, an.</i>	3℔.
<i>Trochisks of Alhandal,</i>	
<i>Sarcocoll, an.</i>	3 ij.
<i>Orrice-Root,</i>	
<i>Leaves of white Hore-hound,</i>	
<i>Choice Myrrh, an.</i>	3 j.

Chuse out your Agaric very clean, white, light, and brittle; new Turbith, cleans'd from its Heart, and white within; beat them together in a large Brass-Mortar, somewhat heated, with the Orrice-Root, the Trochisks of Alhandal, the Myrrh, the Sarcocol, the white Hore-hound, never minding the fatness of the Gums; for without that be, they cannot hinder the waste of the Powder. Sift the Powder through a Silk-sieve; then mixing with it the Hieræ-powder, make it into a solid mass with Burnt-wine, and then beat the mass till the mixture be exactly made.

The Mass of these Pills must be somewhat softer than that of the Hieræ, especially if you intend to keep it long; because the most subtle parts of the Burnt-wine being subject to dissipate, the Mass will become dry in a small time; which if not foreseen, you must be forc'd to beat the Mass again, and moisten it with more Burnt-wine: wrap it up in an oyl'd-piece of Leather, like the former.

These Pills purge very strongly thick Flegm out of the Stomach, and the lower part of the Belly; as also from the Brain: They disburthen the Lungs, and give ease to the Asthmatic, and those that are troubled with old Coughs, through toughness of Flegm. The dose is from a scruple to a dram, as also to four scruples, for them that are of a strong Constitution. They are to be taken after the first sleep, or early in the morning.

Pilulæ Aggregativæ sive Polychrestæ.

<i>Rx. Aloes Succotrina</i>	
<i>Turbith Electæ,</i>	
<i>Diagrydii, an.</i>	3vj.
<i>Rhubarb. Electæ.</i>	
<i>Myrobalanorum Citrinorum, an.</i>	3℔.
<i>Trochiscorum Alhandal,</i>	
<i>Agarici Albissimi,</i>	
<i>Polypodii,</i>	
<i>Myrobalanorum Chebulorum,</i>	
<i>Indorum, an.</i>	3 ij.
<i>Rosarum rubrarum mundat.</i>	
<i>Mastiches,</i>	
<i>Epithymi,</i>	
<i>Zinziberis,</i>	
<i>Salis Gemmæ, &</i>	
<i>Seminis Anisi, an.</i>	3 j.
<i>Succorum Eupatorii & absinthii ad mellaginem inspissatorum, an.</i>	3℔.

Aggregative, or Polychrest Pills.

<i>Rx. Aloes Succotrin,</i>	
<i>Choice Turbith,</i>	
<i>Diagrydion, an.</i>	3vj.
<i>Choice Rhubarb,</i>	
<i>Yellow Mirobalans,</i>	3℔.
<i>Trochisks of Alhandal,</i>	
<i>Whitest Agaric,</i>	
<i>Polypody,</i>	
<i>Mirobalans Chebulæ,</i>	
<i>Indian, an.</i>	3 ij.
<i>Red-roses cleans'd,</i>	
<i>Mastich,</i>	
<i>Epithyme,</i>	
<i>Ginger,</i>	
<i>Sal-Gemmæ,</i>	
<i>Anniseed, an.</i>	3 j.
<i>Juices of Agrimony and Wormwood,</i>	
<i>thick'nd to the substance of Honey,</i>	
<i>an.</i>	3℔.

These Pills are call'd Aggregative, or Polychrest, because they congregate and purge several bad humours together, drawing them from all parts of the body.

Pulverize together in a great Brass-Mortar the Turbith, Rhubarb, Polypody, Mirobalans, Trochisks, Ginger, Roses, Agaric, Epithyme, Anise, and Sal-Gemmæ, and sift them through a Silk-sieve: Pulverize the Diagrydion apart, mixing with it some few drops of Oyl of Sweet-Almonds. Pulverize also the Mastich apart, mixing with it never so small a drop of water. Press forth the Juices of Agrimony and Wormwood, clarify

clarifie them and thick'n them to the consistence of melted Honey, or of a soft Electuary. Beat the Aloes apart also, and having mix'd all the Powders very exactly together, make them up into a Mass with the thicken'd Juices, and Syrup of pale Roses, beating all together in a large Marble-Mortar, till the Ingredients are perfectly mix'd.

I am not of their opinion that would have the Juices of Wormwood and Agrimony dry'd, till fit to be powder'd, and so sifted among the other Powders. For besides that they may be exactly mix'd according to my method, I see no reason to dry them so; since it cannot be done without a considerable waste of their vertue. Considering also that having consumed all the moisture of those Juices, you must not only be constrain'd to make use of some alien moisture to give the Mass its due Consistence, but also put that whose moisture is consum'd to no purpose into the Composition. For you must multiply the Dose of the Syrup of Roses, of which the lesser quantity is always to be preferr'd before the greater, unless you intend by augmenting the quantity and weight of the Mass, that we should proportionably increase the Dose of the Pills. Nor is it to be wondred at, that instead of two Drams of each of those Juices we have set down half an Ounce, having a regard to the moisture that remains in them, after they are only boil'd to the Consistence of Honey.

These Pills purge universally all the ill humours of the body. They are prescrib'd for the Cure of Diseases of the Head, Stomach, Liver, and all the Bowels, the Obstructions whereof they open, and carry off all the ill humours. They are prescrib'd also in long and complicated Agues, and in several obstinate Diseases. Their Dose and manner of taking is the same with Agaric-Pills. They are also to be kept in an oyl'd Skin.

Pilulæ de Ammoniaco Quercetani.

Ammoniac Pills of Quercetan.

℞. *Extracti Aloes Succotrina cum succo Rosarum parati,* ℥ iij.
Gummi Ammoniaci purissimi, 3vj.
Myrrha elect. 3℔.
Pulveris Diatrion Santalon,
Mastiches elect. an. 3j℔.
Croci,
Salis Fraxini,
Absinthii, an. ʒ ij.

℞. Extract of Aloes Succotrine prepar'd with Juice of Roses, ℥ iij.
 The purest Gum-Ammoniac, 3vj.
 Choice Myrrh, 3℔.
 Powder of the three Saunders,
 Mastich chosen, an. 3j℔.
 Saffron,
 Salt of Ash,
 Wormwood, an. ʒ ij.

Reduce into very fine powder apart the Myrrh, the Mastich, and the Saffron. After which having moderately heated a large Brass-Mortar and Pestle, melt therein the Gum-Ammoniac, and having soften'd it with never so little Vinegar of Squills, add thereto the Extract of Aloes prepar'd, as directed in the Third Part of this Pharmacopœa among the Extracts. Then add the Salts of Wormwood and Ash, the Myrrh, the Mastich, and the Saffron pulveriz'd, and mix'd with the Powder of Saunders, and as much of the pale Roses as is necessary. And to make the mixture more exact, beat the whole Mass in the same Mortar, till the Mass be rather a little too soft then too hard, as being apt to dry if kept too long.

These Pills are highly commended for the purging of ill humours from all parts of the body. They are administred with good success in Obstructions of the Liver, the Spleen and Mesentery, and long Agues that proceed from thence. They are effectual in Cachexies, and particularly to carry off the impurities of the Matrix, and to give the retain'd Menstruums the ordinary course. Their Dose is from one Scruple to two: And sometimes to a Dram for strong Constitutions. They are to be taken in a morning fasting, and may be re-taken and continu'd as occasion requires.

Pilulæ Cochicæ.

Cochia Pills.

℞. *Specierum Hiera simplicis,*
Turbith electi,
Trochiscorum Alhandal,

℞. Powders of simple Hiera,
 Choice Turbith,
 Alhandal Trochisks,

B b

Diagrydi,

<i>Diagrydii, an.</i>	℥℞.	<i>Diagrydion, an.</i>	℥℞.
<i>Oles Stillasii Stœchados, vel</i>		<i>Distill'd Oyl of Cassidony, or</i>	
<i>Lavandula.</i>	℥j.	<i>Lavender,</i>	℥j.

Make up the Mass with Juice of Wormwood, thick'nd to the Consistence of Honey.

There are several Receipts of these Pills under the Names of Great and Lesser, which differ very much as to the Ingredients and Doses. Cassidony is prescrib'd in some, omitted in others, as also the Turbith. The Powder of Hiera is sometimes in a lesser, sometimes a greater Dose. But the distill'd Oyls of Cassidony or Lavender are quite left out, while they only use Syrup of Cassidony or Wormwood to incorporate all the rest. But we thought that the distill'd Oyls of Stœchas or Wormwood would afford more vertue then the five Drams of dry Stœchas, serving to no other end then to swell up the Mass of the Pills. We thought also that it was to no purpose to vary the Doses of the dry Medicaments, of which these Pills are compos'd, in regard they all tend to one end, and help to assist one another. We have also chosen the liquid Extract of the Wormwood before the Syrup, the better to fortifie the Stomach and Liver, during the Operation of the Pills, and more proper to make them keep.

These Pills purge very powerfully all ill humours. And they deserve to be us'd as well for the easiness of their Preparation, as for the good Effects which may be expected from them, by cleansing the Head, Stomach, and all the Bowels from their superfluities: And they are to be taken in the morning fasting, or after the first sleep.

Pilule de Cynoglossa.

R. Myrrha aloëta,
Olibani,
Radici Cynoglossi secca,
Seminis Hyoscyami Albi,
Extracti Opii, an.
Crocii,
Castorei,
Resina Styracis, an.

℥vj.
℥v.
℥℞.
℥j℞.

Pills of Hounds-tongue.

R. Choice Myrrh,
Olibanum,
Root of Hounds-tongue,
Seed of white Henbane,
Extract of Opium, an.
Saffron,
Castor,
Resin of Storax, an.

℥vj.
℥v.
℥℞.
℥j℞.

Gather the Root of Hounds-tongue in the Spring-time, when it begins to put forth its Leaves, and having cleans'd and dry'd it, powder it very finely with pure Castor and the Henbane-seed; beat the Saffron apart, as also the Myrrh and the Olibanum; and having prepar'd the Extract of Opium somewhat soft, beat a large Brass-Mortar with a Pestle, and melt the Resin of Storax therein; and having incorporated the Extract of Opium with it, add the Powders thereto, mixing as much Syrup of Cassidony, as will serve to reduce the whole into a Mass somewhat soft, which must be beaten a good while in the Mortar, to make the Mixture perfect. Then put up the Mass in an oyl'd Skin.

Criticks make Objection against this Preparation, because of the Seeds of Henbane. I confess the whole Plant of Henbane is accounted very Narcotic, and that of all the seeds they never use in Physick any but that which bears the white Seed. I know likewise that the Roots of Henbane eaten, deprive men for a time of their sense and reason: But besides that the Seed is that part of the Plant which operates most gently, and for that the use of it is very frequent in Perfumes to be held in the Mouth for the Tooth-ach, the quantity here prescrib'd is so small, and so well corrected, that there is no fear of any ill Effect.

These Pills are very much commended for stopping the Defluxions from the Brain upon the Breast and lower parts, as also upon the Eyes and Teeth. They ease the pains thereof, procure Sleep, and carry off the Acrimony of the Humours that interrupt it. They are to be taken at a distance from eating-time, and at any hour as occasion serves. The ordinary Dose is from two Grains to ten. You may also dissolve a Scruple or half a Dram in Oysters to give ease in Dysenteries, or violent Cholics.

Pilule

Pilula Fatida.

<i>R. Sagapen,</i>	
<i>Ammoniac,</i>	
<i>Opoponax,</i>	
<i>Bdellii,</i>	
<i>Trochiscorum Alhandal,</i>	
<i>Seminis Rutæ,</i>	
<i>Aloes Succotrina,</i>	
<i>Epithymi, an.</i>	3 v.
<i>Turbith electi,</i>	3 ℔.
<i>Diagrydii,</i>	
<i>Radici Esula aceto preparat.</i>	
<i>Hermodactylorum, an.</i>	3 ij.
<i>Zinziberis,</i>	3 j℔.
<i>Cinamomi,</i>	
<i>Spica Nardi,</i>	
<i>Castorei, an.</i>	3 j.

The Stinking Pills.

<i>R. Sagapen,</i>	
<i>Ammoniac,</i>	
<i>Opoponax,</i>	
<i>Bdellium,</i>	
<i>Alhandal Trochisks,</i>	
<i>Rue-Seed,</i>	
<i>Aloes Succotrine,</i>	
<i>Epithyme, an.</i>	3 v.
<i>Turbith elect,</i>	3 ℔.
<i>Diagrydion,</i>	
<i>Spurge-Root prepar'd with Vinegar,</i>	
<i>Hermodactyles, an.</i>	3 j.
<i>Ginger,</i>	
<i>Cinamon,</i>	
<i>Spikenard,</i>	
<i>Castoreum, an.</i>	3 j.

Cleanse and wash the Spurge-Root, and having sprinkl'd it slightly with Vinegar, dry it, then beat it in a great Brass-Mortar among the Turbith, the Hermodactyles, the Ginger, the Cinamon, the Spikenard, the Castor and the Trochisks, to which you may add the Bdellium, and some small part of the Gums which are to be in tears. Beat the Saffron apart as also the Diagrydion and Aloes as before directed. Then draw forth and depurate about four ounces of the Juice of Leeks, and having mingl'd them with their weight in Honey, boyl them together to the consistency of a soft Electuary and take off the Scum. Then heat the great Brass-Mortar and Pestle, and having melted the Gums which were not put into the Powder, and incorporated the weight of Honey prepar'd, add the Powders by degrees, and as much Honey as is necessary to reduce the whole Mass to an indifferent consistence; and beat it a good while in the Mortar.

Euphorbium is known to be so violent and mischievous in its operation, that no man can wonder I should leave it out in these Pills, though I find it in all the Receipts of the fetid Pills in other Dispensatories. We had also the more reason to omit it, in regard we do not find that these Pills have any want of Ingredients conducing to the purposes for which they were design'd, which are to purge vigorously and carry away all Humours, as consisting of Trochisks of Alhandal, Diagrydion, Spurge-Root, Hermodactyles and Aloes, whose virtues are corroborated by the Opoponax, Sagapen, Ammoniac and Bdellium; which at the same time serve also as Correctives to those violent Purgers.

Fetid Pills are chiefly commended for the purging of thick and viscous Flegm, and to remedy those Diseases that proceed from it, as Gouts and Rheumatism, and all Diseases of the Joynts. These are also good against Diseases of the Stomach and Intestines, which proceed from the same Humours. They are also prevalent against the Leprosie, and all deformities of the Skin, but particularly to provoke the Menstruums, to cleanse the Matrix, and dispel the vapours thereof. Their Dose is from a scruple to a dram. They are taken as other Pills; and sometimes ty'd up in little knots to smell to, to repress the Vapours of the Matrix.

Pilula Ruffi.

<i>R. Aloes Succotrina electa,</i>	3 ij.
<i>Myrrhe,</i>	3 j.
<i>Croci,</i>	3 ℔.

Ruffins Pills.

<i>R. Aloes Succotrine,</i>	3 ij.
<i>Myrrhe,</i>	3 j.
<i>Saffron,</i>	3 ℔.

Pulverize the Aloes, Myrrh and Saffron, every one apart, and having mix'd the Powder in a great Brass-Mortar, reduce it into a Mass with as much good Malmsey as shall be needful to bring it to a good consistence, and after you have beat'n it a good while put it up.

Some have giv'n these Pills the name of Pestilential, others have call'd them Common Pills. They gently and as it were insensibly purge off the Impurities of the Stomach, they prevent the putrefaction of Humours, for which reason they are very much

commended in the Sickness-time, and against Epidemic distempers. They may be taken before Dinner, or going to Bed, or in the Morning fasting. Their dose is different, according to the intention for which you take them: For if it be only to keep the Belly open, the dose is from a scruple to a dram; but if it be for stronger Operation, you may give a dram, or a dram and a half to persons of a strong Constitution, to be taken after the first sleep, or in the Morning early.

Pilulæ Aurea.

℞. Aloes Succotrin.	
Diagrydii, an.	3 v.
Rosarum rubrarum mundat.	
Seminis Apii, an.	3 ij β.
Mastiches,	
Seminis Anisi,	
Feniculi, an.	3 j β.
Trochiscorum Alhandal,	
Croci, an.	3 j.

Golden Pills.

℞. Aloes Succotrin,	3 v.
Diagrydion,	
Red-roses cleans'd,	
Parsley-feed, an.	3 ij β.
Mastich,	
Anniseed,	
Fennel-feed, an.	3 j β.
Alhandal Trochisks,	
Saffron, an.	3 j.

Beat together the Parsley, Anise, and Fennel-seeds, with the Trochisks of Alhandal, and Red-roses, and sift the Powder through a Silk-sieve. Pulverize a-part the Diagrydion, Mastich, and Saffron; then having well mix'd all the Powders, incorporate them with as much Syrup of Roses as is necessary to make the mass of a good consistence, which must be beaten a good while.

The Epitheme of Golden is given to these Pills, because of their colour; they purge gently Flegmatic and Choleric humours from all parts of the body; they are prescribed to cure the Diseases of the Stomach and Intestines, especially when they are replete with Wine: Their dose is from a scruple to a dram, to be tak'n after the first sleep, or early in the morning.

Pilulæ sine quibus.

℞. Extracti Aloes Succotrina cum succo palli-	
darum Rosarum parati,	3 xiiij.
Diagrydii,	3 vj.
Agarici Albissimi,	
Rhubarbarii electi,	
Foliorum Senna mundat. an.	3 β.
Rosarum rub. exungulatarum,	
Semina Violarum,	
Semina Castoreæ,	
Mastiches, an.	3 j.

Pills without which I would not be.

℞. Extract of Aloes Succotrin prepar'd	
with Juice of pale Roses,	3 xiiij.
Diagrydion,	3 vj.
Whitest Agaric,	
Choice Rhubarb,	
Leaves of Senna cleans'd,	3 β.
Red-roses cleans'd,	
Tops of Wormwood,	
Seeds of Violets, and	
Dodder,	
Mastich, an.	3 j.

Bruiſe in a great Braſs-Mortar the Rhubarb with the Senna, the Agaric, the Red-Roses, the Wormwood, the Dodder, and the Violet-seeds: Pulverize a-part the Diagrydion, and the Mastich; and having depurated about four ounces of the Juice of Fennel, and boil'd it to an Electuary with its weight in fair Honey, heat the great Braſs-Mortar and Pestle; and having melted the Extract of Aloes therein, and incorporated it with some part of the Syrup of Fennel, put in the Powders by degrees, adding thereto as much of the Syrup of Fennel as is needful to reduce the whole to a sufficient mass, and beat the whole a good while in the Mortar.

These Pills are variously prescribed in several Dispensatories, especially as to the quantities of the Medicaments: But they that will take the pains to consider this Receipt, must acknowledge that it is not inferior to any of the rest, provided it be well prepar'd.

The good effects which these Pills have wrought, have won them the Title of *Sine quibus esse nolo*, *Without which I would not be*. They purge Flegm wonderfully, and both Cholers; they are very prevalent against Diseases of the Head, especially those

of the Eyes and Ears: They are to be taken after the first sleep, or in the morning fasting. Their dose is from a scruple to a dram, and sometimes to four scruples!

Pilulæ de Rhabbarbo.

Rhubarb-Pills.

<i>R. Specierum Hiera picra,</i>	3x.	<i>R. Composition of bitter Hiera,</i>	3x.
<i>Rhabbarbi Electi,</i>		<i>Rhubarb chosen,</i>	
<i>Myrobalanorum Citrin.</i>		<i>Yellow Mirobalans,</i>	
<i>Trochiscorum Diarrhodon,</i>		<i>Trochisks of Roses,</i>	
<i>Succi Absinthii inspissati, an.</i>	3iij.	<i>Juice of Wormwood thick'nd, an.</i>	3iij.
<i>Succi Glycyrrhizæ,</i>		<i>Juice of Liquorice,</i>	
<i>Mastiches,</i>		<i>Mastich,</i>	
<i>Seminis Apii,</i>		<i>Parsley-seed,</i>	
<i>Feniculi, an.</i>	3j.	<i>Fennel-seed, an.</i>	3j.

Beat in a large Brass-Mortar the Rhubarb, Mirobalans, Parsley and Fennel-seeds, the Trochisks, and the Juice of Liquorice, if dry; and having sifted the Powder through a Silk-sieve, and mix'd the Powders of Hiera with it, incorporate them in the great Marble-Mortar, with the Juice of Wormwood boil'd to the consistence of Honey, and as much Syrup of Fennel as is needful to reduce the whole mass to a good consistence, and then beat it a good while in the Mortar.

There is as much difference in the receipt of these Pills, as in any other that are met with in Dispensatories; which diversities require an Examination of this, the Ingredients whereof being as well chosen as proportion'd, I make no question will not fail to produce the good effects expected from them.

These Pills gently purge gross and viscid humours. It is often prescrib'd for the cure of long and painful diseases; for they open the most obstinate obstructions of the Liver and Spleen; they work good effects at the beginning of a Dropie, and are of great advantage at the end of Tertian and Quotidian Agues. Their dose is from a scruple to four, taken in the same manner as *Pilula sine quibus.*

Pilula Stomachica.

Stomach-Pills.

<i>R. Aloes Succotrina elect.</i>	3j.ß.	<i>R. Aloes Succotrine chosen,</i>	3j.ß.
<i>Rosarum rub. exungulat. &</i>		<i>Red-roses cleans'd, and</i>	
<i>Mastiches elect. an.</i>	3ß.	<i>Choice Mastich, an.</i>	3ß.

Pulverize the Aloes, Red-roses, and Mastich a-part; then mix them well, and incorporate them in a great Brass-Mortar with as much Syrup of Wormwood as is necessary to reduce them to a mass of a reasonable consistence, and put it up, being sufficiently beaten together.

There are several Receipts of Stomach-Pills to be met with in Dispensatories, but the plainest of all seems to be the best.

These are call'd Stomach-Pills, because they cleanse the Stomach from all foulness, strengthening it, and rendring it capable to perform all its Functions. They are also call'd Pills before Meals, because they are usually taken before Meals, and require no Regiment at all. They cause but little Evacuation at a time, and are therefore given in a small dose, from one scruple to half a dram. You may take them as often as you find occasion.

Pilula Hyfterica.

Hyfteric-Pills.

<i>R. Facularum Brionia,</i>		<i>R. The Facula, or white Juice of</i>	
<i>Myrrha Electa,</i>		<i>Briony,</i>	
<i>Vitrioli Martis,</i>		<i>Choice Myrrh,</i>	
<i>Salis Arthemisia, an.</i>	3j.	<i>Vitriol of Iron,</i>	3j.
<i>Castorei electi,</i>		<i>Salt of Mug-wort, an.</i>	3j.
		<i>Choice Castor,</i>	

Ruta,

<i>Ruta,</i>		<i>Rue,</i>	
<i>Camphora, an.</i>	$\mathfrak{z}ij.$	<i>Camphire, an.</i>	$\mathfrak{z}ij.$
<i>Extracti mollioris Aloes cum succo</i>	$\mathfrak{z}x.$	<i>Soft Extract of Aloes prepar'd with</i>	
<i>misce parati,</i>		<i>juice of Mugwort,</i>	$\mathfrak{z}x.$

Beat the Castor cleans'd, together with the Rue and one part of the Myrrh, the rest of which must be beaten, as also the Camphire, mingling with the latter a drop or two of Spirit of Wine, the more easily to powder it. You must have the Extract of Aloes ready, as I shall direct in due place, and when it is brought to a consistence somewhat soft, put it into a great Brass-Mortar; and having mix'd with it the Vitriol of Mars, the Salt of Mugwort and the white juice of Briony pulveriz'd, with the rest of the Powders, reduce the whole into a Mass, which must be carefully beaten in the same Mortar for a good while. If the Extract of Aloes should want moisture to suck up the Powders, supply the defect with honey of stinking Arrach, adding what is requisite.

The Extract of Aloes should be prepar'd with juice of Roses, according to some Receipts of these Pills; but we thought it more convenient to make use of Juice of Mugwort, to avoid the contrary effects which the sweet scent of Roses might produce in some Women.

You shall find in the small quantity of Drugs which compose these Pills, more satisfaction as to the purposes, for which they were invented, then in any other Receipts. For it is not generally the great number, but the choice of the Ingredients that makes the goodness of the Composition.

These Pills are not only Specificks to suppress the Vapours that rise from the Matrix, and to calm the disorders and symptoms that many times happen; but also to carry off its impurities, and to provoke the Menstruums retain'd; to which purpose they must be taken for several days. The Pills must be taken in a morning fasting, drinking after them three or four ounces of Mugwort-water, and walk gently upon it for an hour, not taking any thing in two hours after. The Dose is not above half a dram, because of the continuance in taking.

**Pilulæ Mesentericæ, D. D.
D' AQUIN.**

<i>R. Extracti Aloes cum succo</i>	
<i>Fumaria parati, &</i>	
<i>Gummi Ammoniaci elect. an.</i>	$\mathfrak{z}j.$
<i>Crocii Martis aperientis, &</i>	
<i>Diagrydii, an.</i>	$\mathfrak{z}ss.$
<i>Myrrha elect.</i>	
<i>Crocii, &</i>	
<i>Salis Tamarisci, an.</i>	$\mathfrak{z}ij.$
<i>Salis Martis Riverii,</i>	$\mathfrak{z}ij.$

**Mesenteric Pills of Monsieur D. D.
D' AQUIN.**

<i>R. Extract of Aloes prepar'd with Juice</i>	
<i>of Fumitory, and</i>	
<i>Gum-Ammoniac, chosen,</i>	$\mathfrak{z}j.$
<i>Opening Crocus-Martis, and</i>	
<i>Diagrydion, an.</i>	$\mathfrak{z}ss.$
<i>Select Myrrh,</i>	
<i>Saffron, and</i>	
<i>Salt of Tamarisk, an.</i>	$\mathfrak{z}ij.$
<i>Salt of Mars of Riverius,</i>	$\mathfrak{z}ij.$

Having pulveriz'd the Myrrh, the Saffron and the Diagrydion every one apart, and prepar'd an Extract of Aloes somewhat soft, with the Juice of Fumitory, as I shall direct among the Extracts; moderately heat a great Brass-Mortar and Pestle, where after you have gently melted the Gum-Ammoniac in tears, and well incorporated it with the Extract of Aloes, add the Powders by degrees, mix'd together before with the Crocus-Martis, and Salts of Mars and Tamarisk: adding to them as much Syrup of Sacchar compos'd with Rhubarb as shall be necessary to reduce the whole into a Mass of a middling consistence, which must be beaten a sufficient time in the great Mortar. Put up the Mass in an oil'd Skin.

Monsieur the Kings chief Physitian has giv'n the name of *Mesenteric* to these Pills, because they powerfully open the obstructions which they meet with in the Mesentery. They are very prevalent against the obstructions of all the other Bowels. For they dissolve the tartarous matters, and purge very gently, yet fortifie the Nutritive parts. For which reason they may be prescrib'd with success in Cachexies, Dropies, Chronical intermitting Fevers, retentions of the Lunary Purgations, &c. Their dose is from one scruple to a dram if you desire they should work soundly: otherwise half a dram is enough for Persons of middling complexions that must continue to use them.

Pilulæ Mercuriales.

℞. *Rhubarb. electi,*
Trochiscorum Alhandal,
Diagrydii, &
Mercurii sublimati dulcis, an. ʒj.
Terebinthina Veneta, oleo proprio stillantis
diluta, q. s.

Mercurial Pills,

℞. Select Rhubarb,
 Alhandal Trochisks,
 Diagrydion,
 Sweet-Mercury sublimate, an. ʒj.
 Venice-Turpentine wash'd in its own
 distill'd Oyl, q. s.

Beat in a great Brass-Mortar the Rhubarb with the Trochisks of Alhandal, mixing therewith some cold seed cleans'd: Pulverize apart the Scammony, and the *Mercurius Dulcis*, and having sifted the Powders through a Silk-sieve, and well mix'd them in a great Marble-Mortar, incorporate them with the Venice-Turpentine wash'd in a little of its own distill'd Oyl, and reduce the whole into a mass of a good consistence, which must be beaten a good while in the same Mortar.

There are no Pills now-a-days more us'd then the Mercurial; and though there be a great number of Receipts in most of the Dispensatories at this time, particular Receipts of private persons are yet far more numerous, though not so well order'd. I omit the various preparations which they use, and the different Correctives or Assistants which they mix with their Mercury: But I dare be confident, that this Receipt, though but a plain Composition, is as well proportion'd as can be desir'd; and that a better can hardly be found.

These Pills are chiefly design'd for the cure of Venereal distempers. They draw the virulent humours from all parts of the body, and carry them off by the Stool, though sometimes they raise a Salivation to some tender persons, send forth out some part of the Venom at the Mouth, wherein the Prudence of the Physitian is very requisite to quicken or retard the effects, as occasion requires; and to let Nature take its own course, according to the Constitution of the Patient, and the state of the distemper. The dose of these Pills is from one scruple to two, to be taken generally in the morning fasting, and to be continu'd as necessity requires.

Pilulæ ad sistendam Gonorrhæam,

℞. *Radicum Bistorta,*
Tormentilla,
Nymphaea,
Baccarum Hedera,
Seminum Laticæ,
Ruta,
Agni Casti,
Succini,
Sanguinis Hirci,
Masticæ,
Olibani,
Lachrymarum sanguinis Draconis,
Nucis Moschata, an. ʒ ss.

Pills to stop a Gonorrhæa,

℞. Roots of Snake-weed,
 Tormentil,
 Water-Lilly,
 Ivy-Berries,
 Seeds of Lettice,
 Rue,
 Chast-Tere,
 Amber,
 Goats-blood,
 Mastic,
 Olibanum,
 Tears of Dragons-blood,
 Nutmegs, an. ʒ ss.

Beat together in a great Brass-Mortar the Roots of Tormentil, Snake-weed, and Water-Lilly, with the Ivy-Berries, the Seeds of Lettice, Rue, and *Agnus Castus*, the Goats-blood, the Dragons-blood, the Amber, and the Olibanum: Pulverize the Mastic apart, and having well mix'd all the Powders, beat a great Brass-Mortar and Pestle, and incorporate them with the Venice-Turpentine, and reduce the whole into a mass of a good consistence, beating it for a good while in the same Mortar.

Dragons-blood is a Gum that cometh forth out of a Tree, when it is cut or bor'd, that grows in the *Canary-Islands*, and produces a fruit like a Cherry, of a sourish taste, and a yellowish colour. The Gum when it is bruis'd is of a Crimson and bloody colour, whence it has the name of Dragons-blood: But have a care of the counterfeit Dragons-blood, which is only made of Cherry-tree and Almond-tree Gums, dissolv'd and boil'd in the tincture of Brazile-wood, which gives it a red colour, and is us'd by none but Farriours.

The

The number of Astringent is no less then that of Mercurial Pills, and every one may esteem and prepare those he likes best; but there is no question to be made of this, provided the Ingredients be right, and that it be carefully prepar'd; provided also, it be not given till the malignity of the distemper be over, and that it be time to stop the Gonorrhœa. These Pills are to be tak'n morning and evening, but still upon an empty Stomach, and continu'd for several days, especially if the Vessels be debilitated. The dose is from half a dram to a dram.

But because we meet many times with obstinate Gonorrhœa's, difficult to cure, I thought fit to insert here the following Receipt; the Pills are very proper to eradicate all the ill impressions of Venom, that other Remedies could not overcome.

Pilulæ contra Gonorrhœam virulentam.

R. Antimonii Diaphoretici nuper parati, &

Cinnabaris Nativæ, &
Antimonii,

Terra Sigillatæ,

Radici Ireos Florentiæ,

Liquoritiæ,

Succini Albi, &

Oculorum Cancrorum preparatorum, an. ʒss.

Myrrha electæ,

Olibani,

Mastiches, &

Croci, an

3 ij.

Pills against a Virulent Gonorrhœa.

R. Diaphoretic Antimony newly prepar'd, and

Mineral Cinnabar, and
Of Antimony,

Terra Sigillatæ,

Root of Florence-Orrice,

Liquorice,

White-Amber, and

Crabs-eyes prepar'd, an.

ʒss.

Select Myrrh,

Olibanum,

Mastich,

Saffron, an.

3 ij.

Make choice of the cleanest Mineral Cinnabar, and the most weighty you can meet with; grind the white Amber and Crabs-eyes upon Porphyrie: Pulverize the Myrrh a-part, as also the Mastich in drops, the Olibanum, the Saffron, the Cinnabar Mineral, and Cinnabar of Antimony, as also the Diaphoretic Antimony: beat together in the great Brass-Mortar, the Roots of Orrice and Liquorice; and having sifted and well mingl'd them, heat the great Mortar and Pestle moderately hot, and incorporate them with Turpentine, to reduce the whole into a convenient mass; and then beat the mass together again for a good while.

These Pills work wonderful effects for the cure of Gonorrhœa's, especially when general Remedies have preceded: They are to be taken Morning and Evening upon a fasting Stomach, and continu'd, according as the distemper is, for some Weeks: For which reason the dose is but half a dram at a time, though two scruples or a dram may be giv'n, to make them work more quickly, and with more force. The effect of these Pills is imperceptible, till us'd for some time.

Pilulæ de Terebinthina cocta.

R. Terebinthina Veneta in aqua Raphani,
vel baccarum Alkekengi ad duritiem co-
cta,

ʒiiij.

Liquoritiæ mundatæ subtiliter pulveratæ,

ʒj.

Boil'd Turpentine-Pills.

R. Venice-Turpentine boil'd to a hardness
in water of Radishes, or Alkekengi-
berries,

ʒiiij.

Liquorice cleans'd and finely powder'd,

ʒi.

Boil the Turpentine over a soft fire in the distill'd water of Radishes, or Alkekengi-berries, or some other Diuretic Plant, till it be so hard, that you may make it into Pills: Then pour away all the water from the Turpentine, and before it be cold, incorporate with it the Liquorice finely powder'd; and having wrought them well together, put up the mass for use.

These Pills are very much us'd upon retention of Urine, whether caus'd by Flegm, or Gravel, or any Venereal Malignity: They are also good at the beginning of Gonorrhœa's, to make them run. They are taken in a Morning fasting, from one dram to two, and may be taken several days together.

Pilulæ

Pilulæ pro morbo Colico D. D.
D' AQUIN.

℞. Aloes elect. in succo Rosarum pallidarum
diluta & inspissata, ʒij.
Agarici elect. ʒjβ.
Extracti Rhubarbari, ʒj.
Hepatis Lupi preparati, ʒvj.
Summitatum Absinthii, ʒβ.
Pulveris Diarrhodon Abbatis
Salis Absinthii, &
Nucis Moschatæ, an. ʒjβ.

Pills against the Colick of Moun-
sieur D' AQUIN.

℞. Select Aloes steep'd in Juice of pale
Roses, and thick'nd, ʒij.
Select Agaric, ʒjβ.
Extract of Rhubarb, ʒj.
Wolfs-liver prepar'd, ʒvj.
Tops of Wormwood, ʒβ.
Powder of Roses of the Abbot,
Salt of Wormwood, and
Nutmeg, an. ʒjβ.

Look for the preparation of the Extracts of Aloes and Rhubarb in the following Part. Take the Liver of a Wolf newly kill'd, and having taken out the Gall, and wash'd the Liver in White-wine, put it into a glaz'd Earthen-pot; and having well luted on the Cover, set it in a Bakers Oven, after the Bread is drawn: Close the Oven, and leave it there for some hours. Then unlute the Cover, and turn the Liver: Lute the Cover on again, and put the Pot in once more when the Bread is drawn, and let it stand as long as at first; and thus do so often, till the Liver be thoroughly dry, to be kept in a dry place for fear of corrupting. Beat in a great Brass-Mortar the Wormwood, with the Agaric and Nutmegs, and the Wolfs-Liver; and having sifted the Powder through a Silk-sieve, heat the great Brass-Mortar and Pestle, and melt therein, by degrees, the Extracts of Aloes and Rhubarb; and incorporate them afterwards with as much Syrup of Succory as is requisite to reduce the whole into a mass of a good consistence, which must be afterwards well beaten in the same Mortar.

The good effects which are wrought by these Pills for the cure of Colics, especially those of *Poison*, oblig'd Monsieur D' Aquin, his Majesties Chief Physitian, to add the Receipt of them to many others in this *Pharmacopœa* for the Public Good. They gently purge cholerick and serous humours, the gathering together and Fermentation whereof they divert and prevent, as being the usual cause of Colics: They that are subject to them, are to take every other day one, and to continue them till they are cur'd. These Pills keep the Belly op'n, and carry off gently and insensibly the humours that cause them. The dose of these Pills may be augmented to a dram, if you intend a strong Evacuation. They must be tak'n in a morning fasting.

Pilulæ Catholicæ Poterii.

℞. Aloes Succotrina, ʒβ.
Myrrha Electa. ʒij.
Mastiches Electi, ʒj.
Croci, ʒβ.
Magnesia Saturnina meteorisata, ʒj.

Universal Pills of Poterius.

℞. Aloes Succotrine, ʒβ.
Select Myrrh, ʒij.
Select Mastich, ʒj.
Saffron, ʒβ.
White-flowers of Antimony, ʒj.

Chuse your Ingredients well; and having pulveriz'd every one a-part, sifted them through a Silk-sieve, and well mix'd them, incorporate them with as much Syrup of Roses Solutive, as is requisite to give the Mass its due consistence, and beat the whole in the same Mortar for a good while.

I thought fit to insert these Pills, because of the good effects which they may produce. The white Flowers of Antimony, disguis'd by *Poterius* under the Name of *Magnesia Saturnina meteorisata*, are only a powerful Spur to the other Ingredients: And though they are very Emetic alone, yet thus mix'd, they lose that quality, and purge only by Stool. The preparation of these Flowers you shall find in the Third Part of this *Pharmacopœa*.

Poterius, the Author of these Pills, commends them highly against Colics, Asthma's, Megrim's, Vertigo's, Epilepsies, and also for the ease of the Gout: Their dose is from fifteen grains to twenty four: They are to be taken in a morning fasting.

Pilulæ Hydropicæ Bontii.

Rx. Aloes Succotrina,	℥ij β.
Gummi Gutta subtiliter pulverat & cum	
Vino Malvatico dissolut. Lavigati, & sic-	℥j β.
cati,	℥j β.
Diagrydii eodem modo parat.	℥j.
Gummi Ammoniaci Electi,	℥j β.
Tartari Vitriolati,	℥β.

Bontius's Hydropic Pills.

Rx. Aloes Succotrin,	℥ij β.
Gutta-gauma finely powder'd, dissolv'd	
with Malmsey, smooth'd, and dry'd,	℥j β.
Diagrydion so prepar'd,	℥j.
Select Gum-Ammoniac,	℥j β.
Tartar Vitrioliz'd,	℥β.

Beat the Aloes in a great Brass-Mortar, and sift it through a Silk-sieve: Pick out the purest Gutta-gauma, and the fairest Diagrydion; and having ground them very fine upon Porphyry, either together, or a-part, with about the same weight in Malmsey, set them to dry: Then having made choice of pure Ammoniac in tears, and moderately heated the great Mortar and Pestle, melt the Gum therein; then mixing the Tartar vitrioliz'd with all the Powders, and moistning the Ammoniac with about as much the weight of Syrup of Roses Solutive, incorporate them by degrees, still adding as much more of the Syrup as is requisite to bring the mass to its due consistence, which must be afterwards beaten a good while in the same Mortar.

You shall find the preparation of vitrioliz'd Tartar in the Third Part of this Pharmacopœa.

These Pills were invented by Bontius, formerly Physician to the Prince of Orange, who commends them highly for the carrying off all Hydropic waters. They are very effectual to open Obstructions of the Liver, Spleen, and all the Bowels. It is to be taken in a morning fasting, from half a scruple to a scruple.

Pilulæ Tartaræ Bontii.

Rx. Aloes Succotrina elect.	℥ij.
Lachrymarum Gummi Ammoniaci pauco a-	
ceto scilicet dilutarum,	℥j β.
Tartari Vitriolati,	℥β.

Tartar-Pills of Bontius.

Rx. Aloes Succotrine selected,	℥ij.
Tears of Gum-Ammoniac dissolv'd in	
a little Vinegar of Squills,	℥j β.
Tartar vitrioliz'd,	℥β.

Having finely pulveriz'd the Aloes, heat a Brass-Mortar to melt the Gum-Ammoniac, being there dissolv'd in a little Vinegar of Squills; then incorporate the Aloes, and the Tartar vitrioliz'd, and reduce the whole mass to its due consistence, beating the same a good while together.

There are several Receipts of Tartar-Pills; among the rest, one that consists of many Ingredients, in Quercetan, which perhaps might be to be prefer'd before this, if multiplicity of Ingredients made a Receipt good or bad. However we have chosen this, as being plain and easily prepar'd; for these Pills purge wonderfully both the one and the other Choler, and thick and tartarous humours, carrying them off from the remotest parts of the body. They are prescrib'd with success against Madness, and melancholy distempers, that arise from the Hypochondriums, against the Leprosie, Cankers, Quartan Agues, and Venereal distempers. For by opening the obstructions of the Bowels, and voiding the ill humours, they purge the whole mass of the blood. The dose is from a scruple to a dram. They are to be taken in a morning fasting, or just before Dinner.

Pilulæ Tartaræ Schroderi.

Rx. Aloes Lucida in Succo-Tarqorum extract.	℥j.
Lachrymarum Gummi Ammoniaci,	℥ij β.
Magisterii Tartari purgantis in aqua Bu-	
glossi aliquoties soluti & coagulati,	
Extracti Gentiana, an.	℥ij.
Salis Martis subdulcis,	
Extracti Croci, an.	℥j.

Schroder's Tartarous Pills.

Rx. Bright Aloes extracted, with Juice of	
Strawberries,	℥j.
Gum-Ammoniac,	℥ij.
Purging Magistery of Tartar dissolv'd	
and coagulated in Bugloss-water,	
Extract of Gentian, an.	℥ij.
Salt of Mars sweet'nd,	
Extract of Saffron, an.	℥j.

Make up the Mass with Tincture of Tartar.

Having

Having chosen the Aloes Succotrine, very transparent, draw forth the Extract with Juice of Strawberries, as I shall direct in the preparation of Extracts, where you shall also meet with those of Gentian and Saffron. Magistery of Tartar, and tincture of Tartar, are to be found in their proper place, together with the preparation of the Salt of *Mars* of *Riverius*, which is most proper for these Pills, in regard that the Acid of the Spirit of Vitriol, necessary for the dissolution of *Mars*, cannot be better sweet'nd then by the Volatile of the Spirit of Wine, which is there made use of.

Schroderus writes, that after he had had the Receipt a good while, and found the Excellency of its Vertues, he was resolv'd to communicate it to public view, as a proper Remedy to carry off tartarous and musclaginous humours from the lower part of the Belly, to cleanse the Liver, Spleen, and Matrix from Obstructions, and to cure all Diseases that proceed from thence. Take them in the Evening before Supper, about half a scruple weight, and the next morning expect they should work.

Pilulæ de Sagapeno Camilli.

Sagapen-Pills of Camillus.

R. <i>Lachrymarum Sagapeni,</i>	3vj.	R. Tears of Sagapen,	3vj.
<i>Ammoniac.</i>	3ijj.	<i>Ammoniac,</i>	3ijj.
<i>Extracti Trochisch. Alhandal,</i>	3j.	<i>Extract of Trochisks of Alhandal,</i>	3j.
<i>Diagrydii,</i>	3ß.	<i>Diagrydion,</i>	3ß.
<i>Salis Gemma,</i>	3jß.	<i>Sal-Gemma,</i>	3jß.

Powder the Diagrydion and Sal-Gemma, and having heated the Brass-Mortar and Pestle, melt the Gums by degrees: Then incorporate therewith the Extract of Alhandal, and the Powders, adding thereto as much Syrup of Violets, sharp'nd with a little Spirit of Vitriol, as will suffice to reduce it to a good consistency. These Pills are applauded by *Camillus*, and after him by *Quercetan*, for the cure of a Quartan Ague, taking about the bigness of a Pea at the beginning of the Fit: For they insensibly dissolve viscous and tenacious humours, and carry them off by Stool.

I have not inserted certain Pills set down, and commended by *Quercetan*, having Euphorbium for their Foundation: For though that *Quercetan's* preparation of Euphorbium be as good, and as judicious as any that was ever invented; and that it be true, that the Acrimony of the Euphorbium, fix'd to its volatile parts wherein it abounds, cannot be more properly carri'd off, then by mixing those Acids among it which he does, as Juice of Citron, or Spirit of Vitriol. Nevertheless, though the Volatiles may seem to have chang'd their nature, when joyn'd to the Acids, and intermix'd with their smallest particles; this strict Union may at first hinder that operation which they were capable of before in separation, but cannot destroy their first nature: So that when the Acid joyn'd to the Euphorbium meets in the Stomach with any new Volatile, not failing to mix with that as it had mix'd with the Euphorbium; and the latter finding it self freed from the Union which it had with the Acid, is in that time in a condition to exercise its first Nature, and make the same havock it would have done before it was joyn'd, which cannot be help'd, unless it meets with some new Acids in the Stomach, which may, as it were, inebriate it so, that it may suffer it self to be carri'd off by the other Laxatives, and voided with the Excrements, before it has done all the mischief it would have done. These reasons make me stedfast in my Opinion, that it is better not to give Euphorbium by any means inwardly, then to endeavour to change its nature, which it is impossible to destroy, though it may be alter'd for a time.

I was unwilling to swell this Chapter with any more Receipts of Pills, which have been formerly more in use, and which every one has his liberty to chuse as he pleases. For besides that there is nothing particular in their preparation, I think I have already produc'd enough sufficiently to furnish any Apothecaries Shop.

THE
SECOND BOOK,
OF
EXTERNAL PREPARATIONS,
AND
COMPOSITIONS.

CHAP. I.

Of Oyls Extracted by Pressing.

THe Health of Man being the Common End for which all Medicines both Internal and External are made use of, and there being so great a Sympathy between them, that many which are rank'd among the number of the former, may also serve for the same uses as the latter, it is impossible to divide Internal from External Compositions so well, but that there may be some ground of Exception. As may be observ'd in Confection of Alkermes, which is usually giv'n inwardly to strengthen the Heart and noble parts; and which you may also for the same purpose, very advantageously apply outwardly like an Epitheme upon the Heart and Stomack: Or mix'd in Oyl of Scorpions, invented against Poysons; which is chiefly made use of by way of Uction upon the Heart, Liver and Temples. However it is also taken inwardly for the same intent; not to speak of other mix'd Bodies and other Compositions, which may prove useful both outwardly and inwardly giv'n. So that it is no wonder if among the Compositions which have at all times been rank'd among external, we meet with some that may be accounted internal, as being oft-times taken inwardly. Particularly many Oyls, especially Sallet-oyl, which besides the general external use that is made of it in dressing Meat, is often giv'n to drink alone or mix'd with other Medicaments.

Having by this means begun External Medicines with Oyls, I must say that the name of Oyl has been given to certain fat, oily, combustible Liquors, that flow either naturally out of Rocks, as *Petroleum*; or from Plants, as *Opobalsanum*; or which is drawn by Art from divers mix'd Bodies, especially those which are of the number of Vegetables, the diversity whereof is as great as the variety of substances from whence they are drawn. I do not comprehend under Oyls the Fat of Animals, though Unctuous and Inflammable, and that it be put sometimes in the Composition of several Oyls, among several other parts of Animals; having design'd this Chapter principally for Oyls drawn forth by Pressing, or by Decoction; or for those to which we communicate the vertue of one or more mix'd Bodies, which are call'd either Simple or Compound. Referring Distill'd Oyls, and their Preparation to the third part of this *Pharmacopœa*.

Fruits, Berries, and Seeds are the parts of Plants that usually abound most in Oyl; though the other parts are not quite destitute of it. But among all Fruits the Olive is that which yields most, and of which there is the greatest plenty every-where. This Oyl is as much us'd in Dyet as in Physic, wherein the general use of it has been the reason it has receiv'd for excellency and priority of distinctions sake, the name of Oyl, without the addition of Olives. This is one of those Oyls that are drawn forth by pressing.

The

The use of it is chiefly to retain or receive the virtue of several sorts of Plants or Animals, of which it afterwards bears the name, serving as a foundation to a good part of the Simple and Compound Oyls, which are us'd to be prepar'd in Shops by Infusion or Decoction.

Most Authors are of opinion that Oyl that has been longest made is to be preferr'd before any other for Physical uses, so that sometimes they prescribe Oyl of a hundred years old. However the Inhabitants of the Countries where the Oyl is made, generally prefer new pure Oyl before any other; especially for Diet, because it is usually more sweet and more acceptable to the taste: and though they do not despise that of two, three and four years old, they know by experience, that Oyl which has been kept beyond that time, grows at length so thick, and becomes so greasie, that it is only fit for Unguents, Emplaisters, or to make Sope.

The Ancients prescrib'd the making of two sorts of Oyl, and that the most usual being drawn from Olives very ripe, there should be another drawn from green Olives before they come to maturity, to which they give the name of *Oleum Omphacinum*, which they affirm to be much more astringent and cooling then the other, and which they made use of in the composition of Oyls and other Remedies that requir'd those qualities. But we should be now at a great loss to find this *Omphacin*-Oyl, because that green Olives are not in a condition to afford much Oyl, and for that in the Countries where Olives grow in greatest abundance they know not what it is to draw forth Oyl from Olives that are not fully ripe. But though we have not this *Omphacin*-Oyl of the Ancients, the Oyl which is made of ripe Olives, cannot be inferior to it; in regard we may endue it with qualities very near to those which are attributed to *Omphacin*, by the means of Lotions or Infusions impregnated with the qualities which they desire, provided the Oyl be pure, and clarifi'd from all its bad qualities.

Oleum Amygdalarum dulcium.

R. Amygdalarum dulcium putaminibus, & cute membranosa purgatarum, quantum libuerit.

Oyl of Sweet-Almonds.

R. Sweet-Almonds cleans'd from their Husks and Membranous-skins, what quantity you please.

Choose out new Almonds, well grown, out of their shells, well dry'd, and having sifted the dust from them through a coarse Sieve, put them into hot-water; and keep them there till their Husks are well soak'd, that you may slip them off with your fingers; and having taken off the membranous-skin, wipe them in a Linen-cloth, and spread them abroad to dry. Then put them in a Marble-Mortar, and beat them with a Wooden-Pestle, till the Pulp be very thin and begin to yield Oyl; put this Pulp into a Bag of new strong linen: and after you have ty'd the mouth of the Bag, and put it between two thin Tin-plates, or of Wood lin'd with white Latten, put the whole into the Press, squeezing it very gently at first, but afterwards with a considerable strength, leaving the Bag in the Press till the Oyl have time to drop forth. They who should be too impatient at first, and should press the Oyl of Almonds too strongly at the beginning, would force the Feces of the Almonds through the Bag; and the Oyl would come forth thick, which by observing my directions never happens.

The Ancients were wont to beat the Almonds and such other Fruits in *Salera Maria*, or otherwise, after they had beat them, and before they put them into the Press, to get the more Oyl. I confess that more Oyl may be had this way, but it will be more unacceptable to the taste and less cooling. However for some persons not so nice, the beating of the Almonds may be omitted, provided they be well shak'n in a Bag of new coarse Cloath: by reason that then the Almond-pulp is less subject to pass through the Bag, as being hinder'd by the rind, that gives it a firmness; nor is the Oyl less pleasing to the taste, or less sightly to the eye.

Oyl of Sweet Almonds is very much commended against the roughness of the *Apera Arteria*, and the Lungs. It appeases Colicks, especially the Nephretic, cures all retentions of Urine, facilitates the Labors of Women in Child-bed, and appeases their pains after delivery; allwages Coughs in young or old, and the Gripes of little Infants. In a word, it is generally proper for all internal Maladies, where there is occasion to mollifie, allswage, make slippery or to qualifie the heat or acrimony of humours. It is us'd both inwardly and outwardly. It is given alone fasting; it is also mix'd with Loaches, Syrups, Emulsions, and Potions. The dose is from half an ounce to an ounce, and sometimes to two: it is also us'd in pain-easing, and lubrifying Clysters from two to three ounces.

It is also us'd externally alone, or mix'd with Pomatums or in Liniments, as well to smooth the Skin, as to soften and relax the Muscles of the Breast, when they are oppress'd.

Oleum Amygdalarum amararum.

Oyl of Bitter Almonds.

*R. Amygdalarum amararum quantum li-
buerit.*

*R. Bitter Almonds what quantity you
please.*

This Oyl may be prepar'd in the same manner as the sweet Almonds; but because they are seldom taken inwardly, the beating of them may be omitted without Scruple: otherwise they may be beaten and after that moderately heated; and the Plates may be also heated, when you put them into the Press: But they must be gently press'd at first, as I said of the former. Their bitterness lies only in their gross and terrestrial part; so that the Oyl is as sweet as that of other Almonds, the bitterness remaining in the feces: Which though neither hurtful to men, nor to the most part of other Animals, is yet the most dangerous Poison that Poultry can meet with.

Oyl of bitter Almonds is very much esteem'd against hardnesses, inflammations, and stranglings of the neck of the Matrix. It also gives great ease to those who are troubled in their Kidneys, by any gathering together of Flegm, Gravel, or Stone, or are pain'd through difficulty of Urine. It is good against pains in the head, deafness, noise in the Ears, to take away the blemishes of the Face, and roughness of the Skin, and white Scurfs. It is us'd outwardly alone, or mix'd with Pomatums; and inwardly administer'd from half an Ounce to an Ounce alone, or mix'd in Emulsions or other Beverages. It may be also mix'd in Clysters to expell wind, like as Oyl of sweet Almonds.

Oleum Nucum Juglandium, & Avellanae. | *Oyl of Walnuts and Filberts.*

Oyls of Walnuts and Filberts, are to be prepar'd in the same manner as Oyl of sweet Almonds. You must also forbear to heat the Pulps, especially when they are to be taken inwardly, or to be us'd for Cosmetics. For by that means they will be more agreeable to the taste and smell, and be also more refreshing.

Oyl of ordinary Walnuts is recommended against all sorts of Cholicks, especially windy. It is also good against crushing and pricking of the Nerves, against the Itch, Tetters, and Swellings. It is also outwardly apply'd to anoint the Face against Sun-burning in the Month of March, by way of prevention: To which purpose they anoint the Faces of young Children newly born. The Dose and uses of it are much the same with those of Oyl of sweet Almonds: Yet sometimes they use four Ounces, or half a Pint at a time in Clysters, for violent Cholicks, mixing it with Urine and Spanish-Wine.

The Vertues of Oyl of Filberts are very near the same with that of common Walnuts. It is us'd against pains in the Joints, as well in Beverage, as in Uction; as also against the biting of Serpents, about an Ounce at a time: it is apply'd alone, or mix'd with Bears-Grease, or among Pomatums to make the Hair grow.

*Oleum Crysmelinum, seu ex Nucleis Ma-
lorum Persicorum & Armeniacorum.*

| *Oyl of the Kernels of Peaches and
Abricots.*

The Oyls of the Kernels of Peaches and Apricots are drawn by the Press in the same manner as the Oyls already mention'd.

The Vertues of both these Oyls are very near the same. They are highly applauded against Pains, Obstructions, and Noises in the Ears; as also against Deafness, being put into the Ear with a little Cotton dipp'd in them. They appease the pains of the Hemorrhoids, and dissipate swellings which are caus'd by them in those parts: They are good to cure Wounds and Ulcers growing in those places. They are highly commended against Worms in Children great and small, being taken from two Drams to an Ounce. For which purpose the Kernels of Peaches and Almonds beaten, and given in a flowing Emulsion, are very much approv'd and experimented against the Jaundise in both Sexes, repeating the use of them.

Oleum

Oleum Balaninum. | Oyl of the Nut-Ben.

The Nut-Ben, call'd by the Greeks *Balanus Mirepsica*, by the Latins *Glans Unguentaria*, affords its Oyl by pressing, in the same manner as the other Fruits before-mention'd. The Nut-Ben is in some sort triangular, cover'd with a whitish, thin, smooth, and brittle rind: The substance of the Fruit is white, so is also the Oyl; and it is not only without scent, but very proper to receive any scent that you have a mind to give it; and it has this peculiar quality, that it does not grow Musty like other press'd Oyls, but may be kept a long time in a good condition: For which reason Perfumers use it, to receive and preserve the Odours of certain Flowers, which they would otherwise make no advantage of.

The Vertues of this Oyl are highly esteem'd, and among other things to take out freckles and scars from the face, and other parts of the body, apply'd alone, or mix'd with Pomatums. It allwages pains in the Ears, and dissipates the buzzing in them, being mix'd with Goose-grease, and put into them: It is proper to open the Obstructions, and to soft'n and digest the hardnesses of the Liver, Spleen, and other Bowels, being tak'n inwardly: It is us'd against cold diseases of the Nerves and Joynts, as also against the Gout, apply'd upon the parts affected. The dose is from half a dram to two drams, in White-wine, or some other Liquor.

By the same Method, Oyls may be extract'd out of several Fruits of the same nature, and Seeds of like substance; as Pistaches, Pine-apple kernels, the four greater cold Seeds, Kernels of Oranges and Citrons, Sesamum, Palma-Christi-seed, seeds of Piony, Mustard, Hemp, Dwarf-Elder, Henbain, Lettice, Poppy, Carthamum, &c. which have every one their particular vertues, though seldom ready prepar'd in Shops, but upon occasion.

Oleum seminis Anisi per expressionem. | Press'd Oyl of Anniseed.

You must be careful to have your Anniseed new, very dry, well grown, and to make it very clean, and to beat it, and sift it through a close Hair-sieve. Take a pound of this Powder, and having fill'd the hollow of a Plate, that may be set with the brims in the lower part of a Hair-sieve, cover the Plate with the lower part of the Sieve; and keeping one hand upon the Sieve, which must then touch and cover the Plate fill'd with the Powder, and the other under the bottom of the Plate, of an instant turn the whole so, that the Powder may fall upon the Sieve, and be cover'd with the Plate; and the same time have a Copper-possnet ready to that bigness, that the bottom of the Sieve may rest within-side, but not go down to the bottom: then put in three pints of water; and having plac'd the Skillet upon a Furnace, as the water boils, let the Powder of Anniseed receive the vapour for a quarter of an hour, or till the boiling vapours of the water have well penetrated the Powder, and till you can no longer endure the heat of the Plate that covers it: At what time having a strong close Cloth-bag ready, put the powder immediately into it, and having ty'd the Bag, press it between two hot Plates in a Press, with all the speed and strength that may be. By this means a pound of powder of Anniseed will yield an ounce and a half, and sometimes two ounces of Oyl, very sweet, pleasing, and having the true taste of Anniseed.

The preparation of this Oyl may be seen in a Treatise of Chymistry, which I compos'd and set forth in another Name, about twelve years since: But I am sure it is not to be found in any Author that ever wrote before; so that I dare pretend to be the sole Inventor.

Oyl of Anniseed is very much extoll'd for expelling Wind contain'd in the Belly, and for appeasing Colics that proceed from thence: It is proper to strengthen the Stomach, to assist Digestion, and the distribution of the good Juice of the Nourishment to all parts of the body. This Oyl thus prepar'd, is less subtle, and less penetrating, then that which is drawn by Distillation; however, it has less Acrimony, and it may be also given in greater quantity, even to half a dram in Wine, or some other proper Liquor: It may be also apply'd, by way of Uction, upon the Stomach, Navel, and lower parts of the Belly, in Windy Colics. You may also put a drop or two in Childrens Broth that are troubled with griping pains.

Oleum Nucis Moschata. | Oyl of Nutmegs,

The Preparation of this Oyl is altogether agreeable to that of Anniseed. So that if you be but careful to chuse full grown Nutmegs, fat and weighty, to sift the Powder through a close Hair-sieve, to follow punctually my Directions for the press'd Oyl of Aniseed, you shall succeed better then by any other way, and have an Oyl of a very fair colour, and a very good smell; and more by half then from the same quantity of Anniseeds. This Oyl looks liquid and clear as any other Oyl at the time of the Expression, while it is warm; but it coagulates as soon as it is cold, and then appears of a yellow colour enclining to red, and of a solid consistence.

I have formerly given a Preparation of Oyl of Nutmegs, according to my method, in a Treatise which I made upon Treacle, where I blam'd those who following the Precepts of the Ancients, content themselves with heating the Nutmegs beaten, and to press them hot, because that heating cannot be done without a dissipation of the most subtle, most volatile, and most odoriferous part of the Nutmegs, without a remarkable diminution of some part of the Oyl, and without obscuring and spoiling the colour of it. Nor can I subscribe to those who having plac'd Oyl of Nutmegs among the Number of press'd Oyls, would have it prepar'd without fire; believing that they never consider'd what they wrote, and because they never prepar'd, nor never saw this Oyl prepar'd. Others have made use of my method, but to little purpose; but those I let alone.

Oyl of Nutmegs is good against all humidities and coldness of the Stomach, and the Noble parts. For by its moderate heat it dissipates and strengthens the parts both at the same time: it stays vomiting, restoring the Stomach and Bowels to their Functions. It is prescrib'd to correct the stinking of the breath that proceeds from foulness of the Stomach; to help digestion, create an appetite, and excite venereal vigour. It is taken inwardly in meat-broth from six Grains to a Scruple. It is also made use of to anoint the hollow part of the Stomach, having first melted it in a Spoon. To excite Coition, the Natural parts may be anointed therewith. It is also good against cold Fluxes of the Brain, anointing the Temples and Sutures of the head; and against Colicks, anointing the Navel. It is also good for the ground of Balsoms, as well in respect of its odour, as of its vertue to fortifie the Brain and Noble parts, or to suppress the vapours of the Matrix.

Oyl of Mace, endu'd almost with the same Vertues, may be also drawn by the press. You may also extract the Oyls of both by Distillation. But I refer these Preparations to the third Part of this Pharmacopœa.

Oleum Ovorum. | Oyl of Eggs.

Having chosen out new-laid Eggs, or at least those that are not stale, what number you please, boil them in Water till they are very hard, and having taken off the Whites and the Shells, crumble the Yolks into small pieces, and fry them in a Fry-pan over a moderate Fire, stirring them from time to time with a Spatula, or a long Ladle; then leave off and hold them there till they begin to grow red, and to yield their Oyl; then after you have slightly sprinkl'd them with Spirit of Wine, put them into a Linen-Bag very well warm'd, and having ty'd it, and put it into the Press very hot between two hot Plates, squeeze out the Oyl with all the speed you can, and keep it for your use.

The Oyl of Eggs is highly esteem'd to take away Scars, and other Deformities of the Skin; and particularly those that remain after the Small-pox or burning. It asswages the pains of the Ears, and those of the Hemorrhoids; causes the Hair to grow; cures Scabs and Tettors; dissolves and carries off Tumours in the Mouth; and is very proper to heal rifts and chops in the breast, hands, feet, and fundament. It cleanses Ulcers and appeases their pains, as also of all the nervous parts. It is also advantageously laid upon new Burns and Scaldings.

They that fear the bad impression which the Oyl of Eggs may receive in the Pan during the frying of the Yolks, may do better to make use of a glaz'd Earthen-Vessel, for torrefaction of the Eggs, especially if the Oyl be intended for the Face: For which purpose, the better to take from the Oyl any impression of an Empyreuma, to render it more cooling, and by whitening it, to make it fit to be mix'd in Pomatums, you may prepare this Oyl in the Month of May, and expose it to the Dew night

night and morning, stirring it from time to time, and keep it there till the strong scent be gone, and it will look of a white colour. The Ladies of *Languedoc* are not ignorant of this preparation.

Oleum Laurinum.

Rx. Baccarum Lauri recentium perfecte maturarum, quantum libuerit.

Oyl of Lawrel-berries.

Rx. New Lawrel-berries perfectly ripe, what quantity you please.

The Berries being bruise'd, and put into a Kettle, let them boil in a sufficient quantity of water for half an hour; strain them, and press them out very strongly. When the Oyl is cool, scum it off, swimming upon the water like fat: Then bruise the press'd Pulp again, and boil it in the remaining water, adding a small quantity of fresh water to it, for about half an hour; strain it, and press it, as before, and having gather'd the Oyl that swims at the top of the water, keep it a-part.

This Oyl is not easily prepar'd but in hot Countries, and where there is an abundance of Lawrels. The Ancients, and many of the Moderns, would have the Lawrel-berries to be beaten, before you put them into the water to boil; others would have you to boil them whole, provided they be new, and very ripe: I believe that either Method may be good; and that the Berries whole, having the greatest part of their Oyl in their Superficies, and their Rind very tender, will easily afford their Oyl without any confusion; and that by boiling them again, the same Berries will yet yield more Oyl. But I think it better to bruise them after you have drawn off the first Oyl, that you may the more easily obtain that which remains from the more compact part of the Berries: However, the first Oyl will be the greenest, the most pure, and the best; so that it will be convenient to keep the two Oyls a-part.

The same Method may be observ'd for the preparation of oyls of Lentisk, Myrtle, and other Oleaginous Berries.

Oyl of Lawrel-berries corrects the cold intemperature of all the parts of the body, as well that which is single, as that which is accompani'd with Flegm and cold Flatuities: It softens, attenuates, opens, and discusses; it remedies the cold affections of the Brain, Nerves, and Joynts, as also those of the Stomach, Intestines, Liver, Spleen, Reins and Matrix: It is good against the Palsey, weakness of the Nerves and Muscles, the shivering of Agues, anointing the Spine of the Back therewith: It allwages the pains of Sciatic Gouts, and those of the Ears, and inveterate distempers of the Head. It causes sharp humours to expire, driving them to the Superficies of the skin; for which reason it prevails against Scurfs and Tetters. It is also good to kill Worms and Fleas. It may be taken inwardly, to ten or twelve drops, in some proper liquor; but the chiefest use of it is for Exterieur Liniments. It may be also mix'd in Clysters, from half an ounce to one, and sometimes two ounces, in Colics that proceed from wind, or flegmatic and cold humours.

CHAP. II.

Of Oyls prepar'd by Infusion, or Decoction.

Oleum Absinthii.

Rx. Absinthii majoris recentis contusi, lb j.
Succi ejusdem, ℥ iiij.
Rosarum Rubrarum siccarum, ℥ ij.
Olei communis, lb iiij.

Oyl of wormwood.

Rx. Of the fresh bigger Wormwood
bruise'd, lb j.
Juice of the same, ℥ iiij.
Red-roses dry'd, ℥ ij.
Common Oyl, lb iiij.

Take a pound of large Wormwood, when it's mounted up into Flower, and bruise it in a Marble-Mortar, and put it into a glaz'd Earthen-pot, with the Juice of the same Wormwood, and Roses, and Oyl prescrib'd: Then after you have well stopp'd the

D d

Pot,

Pot, place it over a Bakers, or a Cooks Oven, or else in the hot beams of the Sun: Where after it has stood three days, set the Vessel in *Balneo Maria*; and having let it boil for half an hour, strain the whole, and press it forth by main strength. Then return the Oyl press'd forth into the same Pot, with the same quantity of Wormwood, with its Juice, and the other Ingredients, as before; and having stoppt the Pot, and kept it in Maceration, as before, let it boil in *Balneo Maria* again, and strain, and press it, as at first, repeating all the same Operations a third time: Then after you have left the Oyl to settle for four and twenty hours, separate it from the Fæces and moisture, and keep it for your use.

Oyl of Wormwood is highly commended against all cold diseases of the Stomach, for it heats and strengthens very much, assisting it to perform its duty, and restoring the Appetite; it dissipates Wind, and appeases the Colicks caus'd thereby; it kills Worms, and cures the infirmities of the Ears, by stopping them with Cotton dipp'd in some few drops thereof. It is apply'd by way of Unction upon the Stomach and Belly: It is also put into Clysters, from one to two or three ounces.

They that live in hot Countries, where the Beams of the Sun are very violent in *May* and *June*, when Wormwood is in its chiefest strength, may do well to make use of the Sun for Maceration: But in parts remote from the Sun, which enjoy not that heat, we are constrain'd to make use of the heat of Fire, as well for this as for many other Macerations, which are necessary to be done.

I know there are some persons also so exact in the preparation of this, and other Oyls, as to put the Ingredients into a Glafs-Cucurbit, cover'd with its Alembic; and to set the Cucurbit in *Balneo Maria*, to draw away all the moisture that will ascend, to mix it again with the press'd Oyl, and separate it afterwards. But because Oyl of Wormwood, and such-like, are only us'd in Exterior Ointments, I cannot find but that the dissipation of the Volatile parts, very difficult to be preserv'd, is a thing to be more lookt after; besides, that by this method you cannot fail to communicate to the Oyl whatever the Wormwood and Roses have of good qualities, and most proper for the intentions for which this Oyl of Wormwood was invented.

Oyls of Mint, Sage, Dill, Rue, and the like, are to be prepar'd after the same manner.

Oleum Rosatum Simplex.

Simple Oyl of Roses.

R. Rosarum Rubrarum recentium contusarum,
℞ ij.
Succi Earundem,
℞ ℞.
Olei communis,
℞ v.

R. Fresh Red-roses bruise'd,
℞ ij.
Juice of the same,
℞ ℞.
Common Oyl,
℞ v.

Put them all together in a glaz'd Earthen-pot cover'd; macerate them for forty days in the Sun, if possible; then boil them in *Balneo Maria*, press them, and keep the Oyl for use.

This Oyl requires no great trouble, as being made with the only Maceration of the Roses. The virtues and uses are the same with those of the following Oyl.

Oleum Rosatum Compositum.

Compound Oyl of Roses.

R. Rosarum rub. recentium contus.
℞ j.
Succi Rosarum Rubrarum,
℞ iij.
Olei communis,
℞ iij.

R. Fresh Red-roses bruise'd,
℞ j.
Juice of Red-roses,
℞ iij.
Common Oyl,
℞ iij.

Put them in a glaz'd Earthen-pot with a narrow Orifice, and after you have well kept it, set it in Maceration in the beams of the Sun for four days; then having boil'd the Ingredients for an hour in *Balneo Maria*, strain and press them. Return the Liquor press'd forth into the same Vessel again, repeating the same operations thrice in all; and when you have so done, purifie the oyl, and keep it for use.

For want of a hot Sun, set the Pot upon a Bakers or Cooks Oven. Nor is the dissipation of the Volatile parts of the Roses to be fear'd, during the macerations and boilings prescrib'd; by reason these parts are so imbody'd with the watry and terrestial part, that a severer heat then that of a boiling Bath is not able to separate them. And

we find demonstratively that Red-Roses do not impart their sweet scent till after they are dry'd; for which reason we expose them to the heat of the Sun, which acting only upon the superfluous moisture of the Roses, does no damage to the scent, nor to any of the good qualities which we desire. And if there remain any moisture after boiling the Oyl, it will be easie to separate it because it falls to the bottom.

This Oyl is good to dulcifie, and dissipate fluxions that fall upon the External-parts. For it extinguishes inflammations, hinders the descent of the humours, and appeases pains. It tempers the heat of the Stomach, and the heat of the Reins. It allwages the pains of the Head, as also deliriums, and provokes sleep, ducifying the sharp humours that interrupt it by their Acrimony: It must be warm'd before you anoint the parts with it. It may be also inwardly given against the Worms and in Dysenteries, from half an ounce to an ounce. It is good to anoint the part upon Fractures and Dislocations of Bones. It is mix'd with equal parts of Vinegar of Roses to anoint the Head after shaving; to abate the Vapours that ascend in burning-Fevers, which cause want of sleep and Deliriums. This Oyl is also mix'd in pain-easing and dissolving Liniments and Cataplasmes, and to soften Emplaisters to give them the consistence of a Sear-cloth.

The preparation of this Oyl may serve as a rule for the preparation of those of *Nymphaea* or Water-Lillies, Lillies, Violets, Chamomile, Melilot, Elder, Myrtle and the like.

Oleum Jasmini.

Oyl of Jessomines.

Take little Floks of white-Cotten carded, or else little pieces of Cloth whiten'd with Alum, which have no bad smell; and dip them slightly in oyl of Ben drawn without Fire, and having spread them in a Bason of white Earth, Tin, or Silver, strow them over with Jasmin-flowers newly gather'd about a fingers-breadth high: then covering the Bason with a Bason like the former, wrap them up in Woollen or coarse linen-cloth. At the end of four hours take away the first Flowers, and put in fresh; renewing the same operation every three or four hours ten or twelve times. Then put the pieces of cloth or floks of Cotton in a Press, and press out the oyl without any heat at all. This oyl will be impregnated with the scent of the Flowers and keep a long time, so the Viol be well-stopp'd.

The odours and vertues of Flowers of Jessomin are so volatile, that they will endure no heat; so that it is to no more purpose to infuse or boil them, then it is to pretend to impart their scent to any substance by the means of Fire or Distillation: Which engag'd Artists to seek out other ways and means wherein they have so well succeeded, that they are now able to impart their scent to Oyls, Pomatums, Gloves, and other Substances; observing the preceding method.

You may also instead of pieces of cloth, or floks of cotton dipp'd in Oyl of Ben, make use of the Fruit of Ben it self, grossly bruis'd, spreading it in a Bason, and covering it with Jasmine-flowers, after that with another Bason, proceeding in every thing as before, and the Oyl thus drawn without fire from the Ben thus perfum'd, will be as odoriferous, and keep as long.

You may also make use of Sweet-Almonds bruis'd or their Oyl: But still the Fruit of Ben, or its Oyl is better; because that the Oyl of Almonds being subject to grow rank, will spoil the scent of the Jasmins.

The Ancients and some of the Moderns direct the preparation of Oyl of Jessomines to be made by divers Infusions of the Flowers in Oyl of Sweet-Almonds, or Oyl of Olives, and to proceed after the same manner as for Oyl of Roses: But the little vertue and less use of the Oyl thus prepar'd will not permit any Artist to spend his time upon this preparation.

They also who have endeavour'd to extract Roses by distillation, proceeding as in the distillation of Roses, certainly will no longer adhere to that which is so remote from daily experience.

Oyls of Orange, Citron-flowers, Violets, Clove-Gillow-flowers, Roses and many others, may be extracted after the same manner, as that of Jessomines. Not but that these and other Flowers of a more compact substance will also yield their oyls by distillation.

Oyl of Jessomines is principally esteem'd for its pleasing and delightful smell. And it is rather made use of for the pleasures of those that are in health, then for the cure of

the Sick; though the recreating scent may be of no small efficacy to fortifie the Brain and noble parts.

Oleum Cydoneorum.

R. Cydoneorum nondum maturorum contrarium, & Olei cuminum; an.

℥ iij.

Oyl of Quinces.

R. Quinces not fully ripe, bruised, and common-oyl, of each,

℥ iij.

Take the Quinces not fully ripe, and having bruised them in a Marble-Mortar, put them into an Earthen-pot glazed within, with a narrow mouth, together with the oyl prescribed, and having covered the Pot, keep it upon hot Embers for four and twenty hours, and in a boiling Balneo-Mariae for one good hour. Then strain and press forth the matters with a forcible strength. Then putting in the same quantity of fresh Quinces into the pressed oyl, and having repeated the same operations once again, separate the oyl from the feces and moisture, and keep it for use.

Oyl of Quinces is of a very temperate quality. It fortifies and closes; for which reason it is an excellent remedie against weakneses of the Stomach, Liver and Intestines. It also strengthens the lower region of the Belly, as also the Nerves and Muscles relaxed. It stays Vomiting; and is prevalent in case of Dysenteries, Diarrheas, Lienteries: It stops immoderate Sweats being apply'd upon the Breast, and all along the spine of the Back. It is principally made use of for outward Uncction, though it may be taken inwardly if prepar'd with any oyl well chosen. It may be also mix'd from one ounce to two in affragrant and deterfive Clysters.

Oleum de Capparibus.

R. Corticis Radicum Capparium & Fructuum corundem, an.

℥ iij.

Corticis Radicum Tamarisci, & Summitatum ejus Floridarum, an.

℥ ij.

Foliorum Ruta rectissimi,

Cicuta,

Ceterach,

Semini Agni Casti, &

Urticarium Geniste, an.

℥ j.

Acti fortis, &

Vini Albi, an.

℥ ss.

Radici Cyperi, &

Gentiana, an.

℥ ss.

Olei Cuminum,

℥ iij.

Oyl of Capers.

R. The Rind of the Roots of Capers, and Fruit of the same, an.

℥ iij.

Rind of the Root of Tamarisk, and Flow'd-tops of the same, an.

℥ ij.

Fresh Leaves of Rue,

Hemlock,

Ceterach,

Seeds of Agnus-Castus, and

Broom-Buttons, an.

℥ j.

Strong-Vinegar, and

White-wine,

℥ ss.

Root of Cyperus, and

Gentian, an.

℥ ss.

Common-oyl,

℥ iij.

Neither new nor old Dispensatories afford a description of oyl of Capers rightly prescribed; and therefore the Kings first Physician thought fit that I should produce a new one, which has certainly all the virtues that Authors have attributed to this oyl.

Bruise the Roots of Capers, Tamarisk, Cyperus, and Gentian grossly, cut the Leaves and Stalks of the Plants; Squash the Broom-Buttons and Capers in a Marble-Mortar, and in a little Brass-Mortar, beat the Seed of Agnus-Castus. And having put the whole into a glazed Earthen-pot with a straight-neck, among the Oyl, Vinegar, and White-Wine prescribed, cover the Pot and keep it upon the hot Cinders, for four and twenty hours; after which set it in a boiling-Bath till the Wine and Vinegar be almost consum'd. Then strain and press the whole with a violent strength, and when the oyl is well separated from the feces, put it up for use.

Oyl of Capers is very much commended against all pains of the Head, Spleen, and to dissolve ichirrous humours that grow there. For it powerfully cuts, attenuates and dissolves tenacious and rebellious humours. It opens the Pores of the Skin, and the parts which are underneath it; and dissipates the ventosities which are therein contained. The Region of the Spleen may be externally anointed with it.

The various Ingredients of this Composition might seem to require a different method for their Infusion and Decoction. But the cutting, opening and dissolutive qualities here desired cannot be grounded upon the volatile parts which easily dissipate, but rather upon the fixed, which lying long upon the Body, have time to produce their effects. The infusion

Infusion for twenty four hours, preceding the coction, sufficiently opens the Ingredients of more compact substances, whereby they are in a better capacity to impart their virtue to the oyl. Besides that the infusion being made over a moderate fire in a close vessel, and the Acid-parts of the Vinegar binding those few volatile-parts which they meet with in some few Medicaments, there is no fear of dissipation; so that there is no need of different infusions and decoctions, especially the compositions being only intended externally.

Oleum Mastichinum.

Oyl of Mastich.

R. Mastichis electa,
Olei Rosati,
Vini Generosi,

℥vj.
℔ij.
℥ij.

R. Select Mastich,
Oyl of Roses,
Strong-wine,

℥vj.
℔ij.
℥ij.

Having made choice of new clear Mastich, and grossly pulveriz'd it, put it into a strait-mouth'd earthen glaz'd-pot, and after you have pour'd upon it the oyl and the Wine prescrib'd and cover'd the pot, put it into a boyling Maries-Bath; and keep it there till the Mastich be altogether dissolv'd in the oyl. Then take the Vessel from the Fire, strain the dissolution through a small linen-bag, let it settle for some time, and having separated that little watry-moisture that may remain behind, keep the oyl for your use.

The oyl of Mastich is fit to fortifie the Brain, the Nerves and Joynts. It is good against weakneses of the Stomach, and to stay Vomiting: it strengthens the Liver and appeases the pains of it. It is highly applauded against Dysenteries and Lienteries, whether you anoint the Stomach and Belly therewith, or mix it in Clysters from one ounce to two.

The oyl of Mastich has no need either of long or violent coction, it being a Gum that easily dissolves in oyl by reason of the similitude of their substance. That little Wine which is prescrib'd serves only to prevent the bad impression which the Mastich and oyl may receive from the Fire during coction. It was not thought convenient to put four ounces of Wine to a pint of oyl, and three ounces of Mastich, as some direct, nor to boyl it to the consumption of the Wine: which is not to be done without a remarkable disposition of the volatile-parts of the Mastich, and a great alteration of the oyl: nor can there be any thing expected from the Wine whose volatile-part is soon consum'd, the watry and terrestrial parts which remain being good for nothing.

Oleum Nardinum.

Oyl of Nard.

R. Spica Nardi minutim incisæ & comusa,
Vini Generosi,

℥iij.
℥iij.

R. Spikenard cut small and bruis'd,
Strong-wine,

℥iij.
℥iij.

Take six ounces of Spikenard, and having bruis'd them in a great Brass-Mortar, put them into a strait-mouth'd Earthen glaz'd Pot, and having well moisten'd them with four ounces of good Strong-wine, cover the Pot and let them infuse in a temperate place:

Deinde superfundantur

Then add

Olei Communis,

℔jss.

Common-Oyl,

℔jss.

Stop up the Pot, and keep it in a boyling Maries-Bath till the Wine be almost consum'd. After that strain and press the whole strongly, and having separated the oyl from the Feces, put it up for use.

The driness and hardness of the Spikenard is the reason of its being order'd to lye in maceration two hours, to soak, supple and open it, for the more easie penetration of the Oyl. But why the Ancients should prescribe but six ounces of Oyl to three of Spikenard is to me a wonder: For it is impossible that six ounces of Oyl can imbibe and retain all the virtue of three ounces of Spikenard. It being certain that when a Menstruum is sufficiently satiated with the substance which it is put to dissolve, it can receive

receive no more, especially when the substances are drye and able to imbibe a far greater quantity of the Menstruum; so that they had no reason to put nine Ounces of Spikenard to a pound and a half of Oyl, since three ounces are enough to charge that quantity of Oyl. Now though Spikenard be none of the meanest among Aromatics, and that there may be some fear of a dissipation of its volatile parts during coction; yet when we consider, that though it be kept twenty years it still preserves its strong scent and taste, and that it is of a substance more compact then any other Aromatic, we cannot believe that by this Infusion and Coction in a boiling Bath it can lose any considerable part of its substance, but rather that it would be a difficult thing to impart the vertue of the Spikenard by a lesser heat.

This oyl is proper to heat, attenuate, and digest, being a moderate closer; so that it is very useful against cold and windy affections of the Brain, Stomach, Liver, Spleen, Kidneys, Bladder, and Matrix: It unstops and purges the Brain, being dipt with Cotton, and put up the Nostrils, or into the Ears, the pains whereof it allwages. It is good against the Palsy, and shakings of the Nerves; against Tumours, Suffocations, and Stranglings of the Matrix, being us'd as a Pessary. It is also made use of by way of Injection, to allwage the pains of the Bladder.

Oleum Hyperici.

Oyl of S. John's wort.

Rx. Summitatum floridarum Hyperici ad maturitatem vergentium, lb ij.

Rx. The Flower-tops of S. John's Wort inclining to ripeness, lb ij.

Bruise them in a Marble-Mortar, and put them into a streight-mouth'd glaz'd Earthen-pot:

Tunc superfundantur,

Then add,

Olei communis,
et Kina-kinae,

lb iiij.
lb ss.

Common Oyl,
Strong Wine,

lb iiij.
lb ss.

Cover the Pot, and let it stand upon the hot Embers for four and twenty hours; then remove it into a Boiling-bath for two hours, stirring the Ingredients from time to time with a wooden Spatula; then strain and strongly press out the whole. In the mean time, having put the same quantity of the tops of S. John's Wort into the same Pot, and pour'd the press'd oyl upon them, repeat the same Maceration, Coction, Straining and Pressing; and after you have well strain'd and press'd forth the whole, renew all the same operations a third time to new tops of S. John's Wort; then having separated the oyl from the feces and moisture, incorporate it over a gentle fire with two pound of Venice-Turpentine, and when it is off the fire, mix with it three ounces of tincture of Saffron, and keep the oyl for use.

You shall find the preparation of Tincture of Saffron in the Third Part of this Pharmacopæa.

Oyl of S. John's Wort may be prepar'd without adding either Turpentine or Saffron, and it is call'd Hypericon Simple: But this is much better in all respects.

I might have here spoken against some descriptions of oyl of S. John's Wort, which are to be met with in sundry Authors; but I thought it sufficient to give a true one, not doubting but it will be prefer'd before any of those, the defects whereof the meanest Apothecary may easily understand.

Oyl of S. John's Wort thus prepar'd, may be accompted an Effectual Balsom; it heats, attenuates, dissipates and dries: whence it comes to pass, that it is very proper against all pains that proceed from cold, particularly against all sorts of infirmities in the joints, the Sciatica, and all sorts of Gouts, as also to ease the pain of the Teeth. It is an excellent thing to heal all sorts of wounds, together with those of the Nerves, for it glutinates and cicatrizes; it likewise cures Burns: It is good against Worms, and the Convulsion: It is us'd externally to anoint the parts where there is occasion: It is also mix'd in Vulnerary Injections, in Digestives, in Cataplasmes, and many other External Remedies.

Oleum

Oleum Irinum.

℞. Radicum Ireos recentium minutim inci-
sorum, &
Florum ejusdem, an.
Olei communis,

℥ j. ℞.
℔ v.

Oyl of Orrice.

℞. New Roots of Orrice cut very small,
and
Flowers of the same, an.
Common Oyl,

℥ j. ℞.
℔ v.

Scrape and cut very small the Orrice-roots, by reason of the solidity of their substance; then put them together with the Flowers lightly cut, into a glaz'd Earthen-pot; and having pour'd upon them the oyl prescrib'd, and cover'd the Pot, let it stand over hot Embers for twenty four hours, and afterwards in a boiling Bath for two hours; then strain and forcibly press out the whole: Reiterate twice the maceration and decoction of new Roots and Flowers, doing in every thing as at first; then separate the oyl from the faeces, and put it up. This oyl thus prepar'd, will be very much impregnated with the good scent and vertues of the Orrice.

There are some that in making the Infusions and Coctions of this Oyl mingle therewith a Decoction of the Roots and Flowers of Orrice. But this Decoction would be so far from communicating any vertue, that it would be but a charge, in regard the Roots and Flowers have moisture enough, so that if you still add more, by consuming it among the Oyl, the scent and vertue of the whole would be notably diminish'd.

Oyl of Orrice powerfully heats, mollifies, attenuates, digests, and dissolves. It penetrates, concocts, and ripens matters that are gather'd together, dissipates pains in the Ears, corrects the stinking of the Nostrils, ripens Flegm, comforts the Asthmatics, and asswages the vehemency of coughing, being applyed to the breast. It dissolves the swellings of the Kings-Evil, and hardneses of the Spleen and Liver; as also those of the Joints, the pains whereof it eases. It asswages the griping pains of the Intestines, especially those of the Ileum. It is good against the Dropie, and esteemed a specific against the Poyson of Hemlock, and Champignons, taken inwardly about two or three ounces. The same quantity may be also used in Clysters against Diseases of the Intestins.

Oleum Lumbricorum.

℞. Lumbricorum terrestrium crassiorum lota-
rum, & Olei communis, an.
Vini albi,

℔ iij.
℔ ℞.

Oyl of Earth-worms.

℞. Large Earth-worms, and Common
Oyl, an.
White-wine,

℔ iij.
℔ ℞.

Chuse out large Earth-worms, and put them in an Earthen-pot cover'd for three days, to the end they may empty themselves of the Earth which they had swallow'd; wash them well, and having dry'd them in a clean Linen-cloth, put them into an Earthen glaz'd-pot, and having pour'd the Oyl and Wine prescrib'd upon them, and cover'd the Pot, let it stand upon the hot Embers for 24 hours; then for an hour in the boiling Bath, or till the greatest part of the moisture be consum'd. After which having strain'd, and forcibly press'd the whole, separate the Oyl from the faeces, and put it up.

Some add more Wine, but to little purpose; in regard that the moisture of the Worms is such, that the half-pint of Wine is more then enough already for their maceration and coction, and to impart their vertue withall to the Oyl.

The Oyl of Earth-worms is chiefly us'd against pains of the Joints. It is very proper for the cure of Wounds, shrinking of the Nerves, and other Infirmities of the Nerves and Muscles. The use of it is only external.

Oleum Castorei.

℞. Pinguedinis in Cistide vero Castoreo adhe-
renti contenta,
Vini generosi, an.
Olei communis,

℥ iij.
℔ j.

Oyl of Castor.

℞. Of the Fat in the Vesicle adhering to
the true Castoreum,
Strong Wine, an,
Common Oyl,

℥ iij.
℔ j.

Macerate

Macerate them in a glaz'd Earthen-Vessel close shut for 24 hours, then set them in a Bath between luke-warm and boiling hot till the Wine be consum'd: Then having strain'd and separated the Oyl from the feces, keep it for use.

The Unctuous Liquor contain'd apart in a Vesicle within the Bags of the Castoreum, seems to have been chiefly design'd for the preparation of this Oyl, by reason of its fat substance which has some resemblance to Oyl, which the fleshy substance of Castoreum hath not.

The scent of this unctuous part is penetrating and noysom, and very like that of the fleshy part, so that the virtues of it are not much inferior, especially for external application; and certainly the three ounces here prescrib'd must be as much or more effectual, then one ounce of the fleshy part, which some Authors have thought enough for the same quantity of oyl.

We meet with, in some Authors, descriptions of an Oyl of *Castor*, compos'd of several Aromatics, and some watry Gums, the virtue of which they pretend to extract by adding a great quantity of Wine; not considering that watry Gums, though dissolvable in Wine, cannot incorporate with the oyl, but only give it some impression of their virtue, to which the quantity of Wine so excessive is but injurious, in regard the Wine must be consum'd, and in consuming, it certainly carries with it the best part of the Gums, as also of the Aromatics, which is still the more Volatile. For that reason they had done much better, not to use above an ounce of Wine, and only enough to prevent the Emphyreuma of the substances; and to endeavour by a long Maceration, and a slow boiling, to extract the virtues of those Aromatics; and some few drops of the distill'd oyls of the principal Aromatics which they prescribe, would work a better effect among the oyl of *Castor*, then all the Macerations and Decoctions of oyl of *Castor* which they could prescribe.

Oyl of *Castor* is highly commended in cold diseases of the Brain, against the tremblings and contractions of the Nerves; Convulsions, and the Palsie, being apply'd by way of Unction upon the Nerves, and principally all along the Back-bone. It is a singular Remedy also against the tremblings and quiverings of Agues.

Oleum Scorpionum Simplex.

Simple Oyl of Scorpions.

℞. Olei Amygdalarum amararum, ℥iij.	℞. Oyl of bitter Almonds, ℥iij.
Scorpiones vivos, No. Lx.	Live-Scorpions, No. Lx.

Put the Oyl of Almonds into a glaz'd Earthen-pot with a close mouth, and then set the Pot in a boiling Mary's Bath; and when the oyl is very hot, plunge into it sixty the fairest and most vigorous live-Scorpions that can be got, and adding thereto eight ounces of good Wine, and having stop't the pot, let it boil till the moisture be almost consum'd: then strain and press the Scorpions very well; and after you have separated the Oyl from the Feces, put it up for use.

It is a hard matter rightly to prepare Oyl of Scorpions but near those places where the Scorpions breed, because they cannot be carry'd far, but the most of them will die by the way; and therefore it is better to intrust some faithful friend to make it upon the place, then to employ decay'd and languishing Scorpions, or such as dy'd by the way, which besides the diminution of their virtue, may chance to be putrid. In the mean time; I do not find that the Precepts of the Ancients for the preparation of this Oyl had much of judgment in them, who direct a Maceration of the Scorpions in the Oyl during the Dog-days, and then to strain and press the Oyl: For it is impossible that the Sun should heat the Oyl in such sort, as to inable it to penetrate the Scorpions, which are cover'd with a scaly hard skin; especially in our Climate; where though the Sun were able to heat the oyl to such a degree as to wake it penetrate the Scorpions, it could not be able to consume the viscous moisture which is in their bodies, which coming to putrifie, alters the good qualities of the Animals, and causes the Oyl to stink insupportably; which being consider'd, this Preparation must certainly be adjudg'd the best in all respects.

Oyl of Scorpions is esteem'd against detention of Urine: some Authors believe it able to dissolve the Stone in the Kidneys, as also in the Bladder, being apply'd outwardly, or injected into the Bladder. It is made use of with success against the stinging of Scorpions; it is also very good against the Plague and Poyson, not only by outward anointing, but taken inwardly from half a dram to two drams.

Oleum Scorpionum compositum.

Compound Oyl of Scorpions.

R. Olei veteris,	℥vj.	R. Old Oyl,	℥vj.
Foliorum Hyperici recentium,	M. iij.	Fresh Leaves of Saint-John's wort,	M. iij.
Summitatum Chamadryos,		Tops of Germander,	
Calaminthi,		Calaminth,	
Cardui Benedicti, an.	M. j.	Carduus Benedictus, an.	M. j.

Gather the Saint-John's-wort, Germander, Calamint, and Carduus-Benedictus prescrib'd, and having bruis'd them in a Marble-Mortar, put them into a strait-mouth'd glaz'd Earthen-pot, and pour upon them six Pints of Oyl of two or three years old, well depurated. Stop the Pot, and expose it to the Sun for twelve days; and after that set it in *Balneo Maria* lukewarm for three days; then let it boil for an hour, and having strain'd and press'd out the whole,

Tunc

Then

R. Florum Hyperici Recentium rejectis stipitibus contusorum,	M. vj.	R. Flowers of Saint-John's-wort, fresh and cleans'd from their Stalks.	M. vj.
--	--------	--	--------

Bruise them in a Marble-Mortar, put them in the Pot, and pour upon them the press'd oyl of the first infusion; and having well-stop'd the Pot, expose it to the Sun for twelve days; at the end whereof, having kept the Pot three days in the luke-warm Bath, and afterwards in the boiling Bath for the space of an hour, strain and forcibly express the whole as at first.

Expressioni eodem vase exceptæ adde

To the Expression in the same Vessel add

Granorum Hyperici floribus spoliatorum, semine turgentium, contusorum,	M. ix.	Of the round heads of Saint John's-wort, without the Flowers, full of seed, and bruis'd,	M. ix.
--	--------	--	--------

Repeat Insolation, Maceration, Coction, Straining, and Pressing as before:

Hisq; peractis,

which done,

R. Foliorum Scordii recentis,	M. jß.	R. Leaves of Water-Germander,	M. jß.
Calamintha,		Calamint,	
Cardui Benedicti,		Blessed Thistle,	
Verbena,		Vervain,	
Dittamni Cretici, &		Tops of Cretan Dittany, and	
Comarum Centaurii minoris, an.	M. ß.	Lesser Centaury, an.	M. ß.
Radicum Zedoaria,		Roots of Zedoary,	
Dittamni albi,		White Dittany,	
Gentiana,		Gentian,	
Tormentilla,		Tormentil,	
Aristolochia Rotunda, an.	3iij.	Round Birthwort, an.	3iij.

Bruise them all, put them into the Pot with the oyl press'd forth, stop the Pot and keep it three days in the luke-warm Bath; afterwards let it boil an hour, and strain and press forth the Ingredients.

Tunc,

Then,

R. Scorpiones trecentos diebus Canicularibus captos.	R. Three hundred Scorpions taken in the Dog-days.
--	---

E c

Put

Put them in the Pot that serv'd for the other Infusions, and set it upon very hot Embers, often stirring the Scorpions, and stirring them one upon another, till the Scorpions begin to sweat and be angry, then pour upon them the last Expression, and having stopp'd the Pot, keep it 24 Hours in the luke-warm Bath; and afterwards having let it boil about an hour, strain and strongly press the Scorpions; then throw them away, and keep the Oyl.

Tandem,

R. *Cinnamomi Electi*,
Syriacis Calamita,
Benzoyni, an.
Baccarum Juniperi,
Santalii Citrini,
Theriaca,
Mithridatii, an.
Rhubarbari,
Myrrha Electa,
Aloes Succotrine, an.
Nardi Indica,
Nigella Romana, an.
Funci Odorati,
Cyperus,
Croci, an.

3 ix.

3 vj.

3 β.

3 iij.

3 ij.

3 j β.

Lastly,

R. Select Cinamon,
 Calamite-Storax,
 Benjamin, an.
 Juniper-Berries,
 Yellow Saunders,
 Treacle,
 Mithridate, an.
 Rhubarb,
 Select Myrrh,
 Aloes Succotrine, an.
 Indian Nard,
 Roman Fennel-flower, an.
 Camels-hay,
 Cyperus,
 Saffron, an.

3 ix.

3 vj.

3 β.

3 iij.

3 ij.

3 j β.

Beat all these together, except the Treacle and Mithridate, and put them into the Pot with the Treacle and Mithridate, and the Expression of the oyl; then stop the Pot, and keep it four and twenty hours in *Balneo Maria* luke-warm; after that, cause the Bath to boil for about half an hour, and then strain and press the whole violently through a strong close-woven linen-cloth; and having separated the oyl from the feces, keep it in a Bottle close-stopp'd.

The Quantities of the Ingredients that compound this oyl, are very like to those in the Receipt which *Matthiolus* has left us. The greatest alteration is in the oyl, which is here with great reason augmented to half as much again. For besides that it is impossible that three pints of oyl should imbibe and retain the Vertues of so many Ingredients, the greatest part of the oyl would be wasted in so many re-iterated strainings and expressions: and it is well if after all is done, you find five pints of the six here prescrib'd. You shall find also the times and number of the Infusions less'n'd; and it had not been amiss to have taken away more, considering the various parts of the Hypericon, which are to be us'd; which being not to be gather'd, but at several times, force us to prolong the Infusions, and to stay till the Dog-days, which is the time appointed to take the Scorpions. As to the Treacle and Mithridate, which *Matthiolus* would have left in the oyl after all the other Operations are ended, I say, that besides that they are able to communicate their virtue to the oyl without leaving it in the substance, certain it is that they would lye like Mud at the bottom of the oyl, without any addition to the virtue of the oyl; whereas according to this Method the oyl will be pure and slightly, and altogether as effectual. It is also very proper to reserve all the Aromatics till the last Infusion, and give them less heat, to avoid the dissipation of their principal volatile parts. Nor is there any need of Wine, in regard the Hypericon and other Plants afford all that moisture which is requisite, for all the Infusions, Macerations, and Coctions prescrib'd; besides that this moisture is also augmented by that of the Scorpions, which afford enough not only for their boiling, but also to hinder the dissipation of the Sulphury parts of the Aromatics.

This oyl being apply'd to the Arteries of the Temples, the Wrists, the Feet, the Nostrils, the Region of the Heart, and the Pit of the Stomach, by often anointing, every three hours, and taken inwardly twice a day, from half a scruple to half a dram, is highly commended against all sorts of Poysons and Venoms, especially those that are not corrosive; against the bitings of Vipers and Asps, and all sorts of venomous Animals; to preserve from and cure the Pestilence. It is also successfully made use of against the Small-Pox, the Meazles, and in all Epidemic Diseases: As also against the Epilepsie, the Palsie, and most part of the Infirmities of the Brain. But particularly against Worms, and against the Poyson of Wolfs-bane, and other Aconites.

Oleum

Oleum Vulpinum.

Rx. *Vulpem adultam, pelle exutam, exenteratam, & in partes dissectam,*
Salis communis, ℥ iij.
Aqua Fontana, q. s. ad Vulpis coctionem.

Oyl of Foxes.

Rx. A young-grown fat Fox, flea'd, disim-bowell'd, and cut into pieces,
 Common Salt, ℥ iij.
 Fountain-water, as much as will serve to boil the Fox.

Boil the pieces in an Earthen-pot glaz'd within, and cover'd, over a gentle fire, till the flesh come from the bones; strain the broth, and throw away the squeeze'd flesh of the Fox.

Tunc

Rx. *Summitatum Thymi, & Anethi recentium, an.* Mij.
Salvia,
Rorismarini, & Chamapityos, an. Mj.
Olei communis, lb iij.

Then

Rx. Tops of Thyme, and Dill fresh gather'd, M ij.
 Sage,
 Rosemary, and
 Ground-Pine, an. M j.
 Common Oyl, lb iij.

Return the Broth into the Pot; and having put in the Herbs, and the Oyl prescrib'd, cover the Pot very close; and after you have let it stand 24 hours in the luke-warm Bath, make the Bath boil for two hours together; then having strain'd and strongly press'd out the whole substance, and separated the Oyl from the Feces, put it up for your use.

Though the Ancients in the preparation of this Oyl, boil'd the Fox in Oyl, adding water and salt requisite; yet the Method of boiling the Fox first in water and salt, is in my opinion much better, as well to prevent the alteration of the Oyl by the fire by a long Coction, as for the more plentiful extraction of the succulent Juice of the Fox, which dissolves more easily in salt without oyl, then if the oyl were mingl'd with it. As for the Aromatic Herbs, their vertue exhales far less, being sufficiently imparted to the oyl by their Infusion, and boiling in the oyl and broth; then if you should have put them in at the beginning to boil with the Fox, as the Ancients direct.

Oyl of Fox powerfully digests and discusses cold humours that fall upon the nervous and membranous parts. It is proper against all cold infirmities of the Joynts, against Rheumatismes, Sciatica's, and cold Gouts. It may be apply'd hot upon the parts alone, or mix'd with other Unguents, or proper oyls.

Oleum Viperinum.

Rx. *Viperas viventes magnas pingues & vividas,* N^o xij.
Olei communis purissimi, lb ij.
Vini Albi generosi, ℥ ij.

Oyl of Vipers.

Rx. Live Vipers, large, fat, and vigorous, N^o xij.
 Pure common Oyl, lb ij.
 Strong White-wine, ℥ ij.

Pour the oyl into a glaz'd Earthen-pot with a narrow mouth, and let it boil in a hot Bath till you cannot endure your finger in it; then plunge the Vipers, one after another, into the oyl: when they are stiff'd, pour in the Wine prescrib'd, cover the Pot, and set it a-boiling, till the moisture of the Vipers be almost consum'd; then having strain'd and strongly press'd forth the whole, and separated the oyl from the feces, keep it for use.

Oyl of Vipers is principally commended against the deformities of the skin, as Tetter, Scurf, and Leprous Ulcers. It is also highly esteem'd against those Ulcers which are caus'd by the Venereal Poyson. The use of it is External, us'd alone, or in Liniments, or in Pomatums. It is also recommended to assuage the pain of the Emroids, and to facilitate the delivery of Women, the whole Region of the Belly being anointed therewith.

Oyl of Serpents may be prepar'd after the same method, proportionating the Oyl to their largeness and thickness; and you may make use of it for the same purposes, though you cannot expect the same effects as from Oyl of Vipers.

Oleum Lacertarum.

Oyl of Lizards.

R. Olei expressi Nucum juglandium depu-
rati, lb iij.
Vini Albi, 3 iij.

R. Press'd Oyl of Walnuts depurated, lb iij.
White-wine, 3 iij.

Put them into a glaz'd Earthen-Pot with a narrow mouth, set it in *Balneo Maria*, and boil the Ingredients till you cannot endure the heat with your Finger.

Tunc

Then

Accipe Lacertas, viventes, virides, & vivi-
das, N^o xij. vel xv. vel xx. pro ratione
magnitudinis.

Take live, green, vigorous Lizards N^o xij.
or xv. or xx. as they are in bigness.

Suffocate them in the scalding Oyl, and having well-stopp'd the Pot, boyl them to the consumption of their moisture, then strain and press them, and reserve the pure oyl.

'Tis impossible to limit the number of Lizards, by reason some are bigger some less; and therefore it is left to the judgment of the Artift to take up more than will suffice for the oyl. But take heed of the Directions of the Ancients in the composition of their oyl, as well as of those of Vipers and Serpents, who after they had stifled these Animals in the oyl expos'd them to the Sun. For they presently putrifie, and infect the oyl with an insupportable stink, so far they are from communicating any virtue to it: which is prevented this way.

Oyl of Lizards has been recommended from time to time to make the Hair grow. It is a specific to cure the descent of the Intestines or Bursifness. To which purpose, first put up the Bowel in its place, and anoint the part with this oyl warm'd; Then laying upon it the Pannicle that envelops the Intestines of any Animal whatever, moisten it with this oyl, and strow it over with some astringent powder, binding on a good Pillow to keep the Bowel tite. This passes currant for a certain Remedy, the Tryal whereof can do no hurt.

Oleum Myrrhæ per deliquium.

Oyl of Myrrh by draining.

R. Ova Recentia N^o xij. vel quantum li-
buerit.

R. New-laid Eggs N^o xij. or what you
please.

Harden the Eggs in boiling-Water, take off the Shells, and slit the Eggs full in the middle from one end to the other; then put into the Concavities of the Whites powder of Myrrh finely pulveriz'd; then join both pieces together, and having bound them lightly together with a string, hang them up in a Cellar, or a cool place, with a Vessel under them, for the liquor to drop into them, which will be a dissolution of a good part of the Myrrh in the watry part of the white of the Eggs. Pour this Liquor into a little Glass-Cucurbit, and having plac'd it in a *Balneo Maria* luke-warm, evaporate about a fourth part; which is only the superfluous moisture, that would have putrifi'd the oylie Liquor, by any long continuance with it.

Oyl of Myrrh is recommended against all deformities of the Skin. It is us'd with advantage to take away blemishes and scars in the Face; as also to cure the Itch, Tetters, and Ulcers. It is onely for external uses, either alone, or mix'd with Pomatums and vulnerary Injections.

Both the old and new Dispensatories are cramm'd with Receipts of several other Oyls, highly commended by the Inventer, but I thought it not convenient to swell this Pharmacopœia with any more to little purpose.

CHAP. III.

Of Balfomes.

THe great Affinity that Balfoms have with Oyls, is the reason that I thought it requisite to treat of their preparations in the next place. Balfoms are either Natural, or Artificial: Those which are Natural I pass over, as having no need of preparation. Artificial Balfoms are compound Remedies, most commonly externally apply'd, some of which are of a consistence more solid then that of ordinary Oyntments, and are prepar'd principally for their good odour, and to recreate and fortifie the Noble parts: Others are more liquid, of a consistence between Oyls and Liniments, the principal use whereof is for wounds, though they are prepar'd for the most part of diseases, for which Liniments and Oyntments are prepar'd.

There are also distill'd Balfoms compos'd of several Aromatics, and divers distill'd Oyls; but these are rather Chymical then Galenical, and rather for inward then outward application; and it would be to little purpose to insert preparations in this *Pharmacopœa*, seldom us'd, which may be found in a great number of Dispensatories.

Press'd Oyl of Nutmegs, by reason of its solidity, when it is grown thick, is the most usual Basis of all odoriferous Balfoms, to stop the fluidity of the distill'd Oyls which compose them, and to prevent the Balfom from running about the Pockets of those that carry them. But in Balfoms where odour is not minded so much as the saving of expence, sometimes white Wax is us'd, and sometimes Lambs or Kids fat; sometimes Deer's or Veal-Marrow, and sometimes Manna in Tears. And because it is sometimes desir'd that these substances should be altogether void of scent, to the end that not being able to impart of themselves, they may be fit to receive the odours of distill'd oyls, or other Aromatic substances, we make use of Spirit of Wine tartariz'd, which we pour upon the oyl of Nutmegs, or upon the Wax, Fats or Marrows, about a fingers-breadth above the Matters, and after three days digestion, draw off the Spirit of Wine with a gentle fire, by that means finding a white matter at the bottom void of scent.

Balsamum Apoplecicum.

<i>Rx. Olei Nucis Moschata expressi,</i>	<i>3j.</i>
<i>Resina Stryacis,</i>	<i>3ij.</i>
<i>Balsami Indici,</i>	
<i>Ambregrise, an.</i>	<i>3j ℥.</i>
<i>Zibethi Veri,</i>	<i>3iij.</i>
<i>Muschi Orientalis,</i>	<i>3j.</i>
<i>Olei succini rectificati,</i>	<i>3℥.</i>
<i>Olei Cinnamomi stillati,</i>	<i>3j.</i>
<i>Oleorum stillatiorum Lavendula,</i>	
<i>Marjorana,</i>	
<i>Rue,</i>	
<i>Caryophyllorum, an.</i>	<i>gr. xv.</i>
<i>Citri,</i>	
<i>Arantiorum, &</i>	
<i>Ligni Rhodii, an.</i>	<i>3℥.</i>
<i>Gagatis,</i>	<i>gr. vj.</i>

Apoplectic Balfom.

<i>Rx. Press oyl of Nutmegs,</i>	<i>3j.</i>
<i>Rosin of Storax,</i>	<i>3ij.</i>
<i>Indian-Balfom,</i>	
<i>Ambregrise, an.</i>	<i>3j ℥.</i>
<i>True Civet,</i>	<i>3iij.</i>
<i>Oriental Musk,</i>	<i>5j.</i>
<i>Rectif'd oyl of Amber,</i>	<i>3℥.</i>
<i>Distill'd oyl of Cinnamon,</i>	<i>3j.</i>
<i>Distill'd oyls of Lavender,</i>	
<i>Marjoram,</i>	
<i>Rue,</i>	
<i>Cloves, an.</i>	<i>gr. xv.</i>
<i>Citron,</i>	
<i>Oranges, and</i>	
<i>Lignum Rhodium, an.</i>	<i>3℥.</i>
<i>Agate,</i>	<i>gr. vj.</i>

Having finely powder'd the Musk and Ambergrise in a little Brass-Mortar, mixing therewith the least drop of one of the distill'd oyls, melt the oyl of Nutmegs in a Silver-spoon over a very soft fire, and when it is melted, and half cool again, incorporate with it the Rosine of Storax, the Balfom of Peru, the Musk and Ambergrise; then add the Civet, and the distill'd oyls, and having well mix'd them, the Balfom is made.

They who have a warm hand, and can have the patience, may mix all the Ingredients in the palm of their hands, first melting the oyl of Nutmegs by degrees, by tempering it, and pressing it with a Silver-Spatula against the palm of the hand; then mixing first the

the Storax and Balsom, afterwards the Musk, Ambergrise, and Civet, and lastly, the distill'd Oyls; by this means the Balsom will be less in danger to lose its subtle parts, then by making use of the fire.

This Balsom bears the Name of *Apoplectick*, by reason it is a great Remedy against Apoplexies, and all diseases of the Brain, which it powerfully fortifies, together with all the Noble parts. It is also highly recommended for its excellent Odour, as being not only delightful, but a great preservative against ill smells and pestilential Air. It operates in a small quantity, never carrying above half a grain at a time, when only for the odours sake: But several times as much may be us'd in diseases of the Brain, to anoint the Temples, and Sutures of the head, or to put into the Ears with a little Musk'd Cotton.

Balsomum aliud Apoplecticum.

℞. Olei Nucis Moschata expressi, &
Cera Alba, an. 3j.
Oleorum Rosimarini,
Salvia,
Lavendula,
Succini,
Ruta,
Majorana,
Gagatis,
Caryophyllorum, an. 3j.
Balsami Peruviani, 3ij.

Another Apoplectic Balsom.

℞. Press'd oyl of Nutmegs, and
White Wax, an. 3j.
Oyls of Rosemary,
Sage,
Lavender,
Amber,
Rue,
Marjoram,
Jet,
Cloves, an. 3j.
Balsom of Peru, 3ij.

This Balsom is to be prepar'd like the former, the first way; though it might be done the second, not making above the eighth part at a time.

This Balsom has not so pleasing a scent as the former, but it is of great vertue against all diseases of the Head, and against Pestilential Air. It is also good to suppress the vapours of the Matrix.

Balsomum Hypnoticum.

℞. Olei Nucis Moschata expressi, &
Unguenti Populei, an. 3j.
Medulla Cervina,
Olei Rosati, &
Nymphaeae, an. 3iij.
Oleorum expressorum seminis Hyoscyami, &
Papaveris Albi,
Extracti Opii, &
Croci, an. 3ij.
Ambragrifia,
Moschi,
Zibethi, &
Olei stillatitii Ligni-Rhodii, an. gr. viij.

A Balsom to provoke Sleep.

℞. Press'd oyl of Nutmegs, and
Unguentum Populeum, an. 3j.
Deer's Marrow,
Oyl of Roses, and
Water-Lilleys, an. 3iij.
Press'd oyls of Henbane-seed, and
White-Poppies,
Extract of Opium, and
Saffron, an. 3ij.
Ambergrise,
Musk,
Civet,
Distill'd oyl of Lignum-Rhodium, an. gr. viij.

Moisten the Extracts of Opium and Saffron with never so little good Spirit of Wine, then incorporate them by degrees over a gentle fire with the oyl of Nutmegs, Deers Marrow, and Poplar oylment; after that, add the oyls, and lastly the Ambergrise, pulveriz'd and incorporated with the Civet. This Balsom was invented gently to provoke Sleep, and to allwage the pains of the Head that accompany continual Fevers, and sometimes intermitting: To which purpose, put up a small quantity into the Nostrils, or into the Ears, you may also anoint the Temples and Wrists, and rub the Soles of the Feet: It may be also us'd among Medicaments for Frontals, dry or moist, rubbing the out-side of the Frontal with it, which ought to be apply'd to the Forehead, and ought to contain the Ingredients of the Frontal.

Balsamum Stomachicum.

A Balsom for the Stomach.

℞. Olei Nucis Moschata expressi,	℥ ij.	℞. Press'd oyl of Nutmegs,	℥ ij.
Absinthii Vulgaris,		Oyls of common Wormwood,	
Masticini,		Mastic,	
Nardini, &		Nard, and	
Cera Alba, an.	3vj.	White Wax, an.	3vj.
Oleum Stillatiorum Absinthii,		Distill'd Oyls of Wormwood,	
Menta Crispa,		Crisped Mint,	
Cimamomi,		Cinnamon,	
Caryophyllorum,		Cloves,	
Thymi, &		Thyme, and	
Mucis, an.	3j.	Mace, an.	3j.

The preparation of this Balsom requires no more, then to melt the white VVax and the Oyl of Nutmegs over a very gentle fire, and to incorporate the Oyls prescrib'd, when they are off from the fire.

It is very proper to heat and fortifie the Stomach, so that it may be advantageously made use of to stay Vomiting, help Digestion, create an Appetite, alluage pains of the Stomach, Colicks, and Dysenteric Gripes: It is also very effectual in cold distempers of the Brain and Nerves, the parts being anointed therewith.

Balsamum Uterinum.

A Balsom for the womb.

℞. Sevi Hircini,	℥ ij.	℞. Goats Tallow,	℥ ij.
Lachrymarum Galbani, &		Tears of Galbanum, and	
Asa-fatida,		Asa-fatida,	
Pinguedinis in Cystide Castoreorum conten-	3j β.	The fat contain'd in the Vesicle of the	
ta, an.		Castors, an.	3j β.
Oleum Stillatiorum succini,		Oyls distill'd of Amber,	
Gagatis,		Jet,	
Ruta, &		Rue, and	
Sabine, an.	3ij.	Savine, an.	3ij.

Heat a Brass-Mortar to a moderate degree of heat, and having incorporated them with the unctuous part of the Castor, and the distill'd oyls, melt the Goats Tallow in a small Frying-pan, and when it is half cold, mix all together.

This Balsom apply'd hot to the hollow pit of the Navel, covering the part at the same time with the half of a Wall-nut-shell, is an excellent Remedy against the vapours of the Matrix, the pains whereof it allwages. You may also put up never so little into the Nostrils, and anoint the out-side of the throat therewith. It is also good to provoke the *Menstruums*.

Balsamum pro puerulis dentientibus.

A Balsom for Children breeding Teeth.

℞. Butyri Mayalis non saliti,	℥ iij.	℞. May-Butter without any Salt,	℥ iij.
Pinguedinis Gallinae, &		Hen's fat, and	
Anatis, an.	3ij.	Duck's fat, an.	3ij.
Succi Cancrorum fluvialium contusorum		Juice of River-crabs bruised, extracted	
cum aqua florum Cyani extracti, &		with water of Blew-bottle flowers, and	
Mucilaginis Radicis Althaeae, an.	℥ ij.	Mucilage of the Root of Althaea, an.	℥ ij.

Beat two or three River-crabs in a Marble-Mortar with a wooden-Pestle, and having moisten'd them with a little Blew-bottle water, press out two ounces of the Juice: Prepare also two ounces of Mucilage of Marshmallow-roots, put them together with the May-Butter, Hens and Ducks Grease, into a glaz'd Earthen-pot, and boil them over a gentle fire, to the consumption of half the moisture; then strain them, and add,

Sacchari

<i>Sacchari Candi subtiliter pulverat.</i>	℥ iiii.	Sugar-Candy finely powder'd,	℥ iiii.
<i>Vitellum unum Ovi,</i>		One Yolk of an Egg,	
<i>Moschi, &</i>		Musk, and	
<i>Ambragrisia, an.</i>	gr. vj.	Ambergrise, an.	gr. vj.

Incorporate them well together, and the Balsom is made.

This Balsom has been experimented for its Excellency, to soften the Gums of Infants, whose Teeth are ready to cut: Their Nurfes must be careful to anoint them often. The use of it is no way inconvenient, for being pleasing to the taste, it can do no harm, though it be swallow'd.

Balsamum Egregium pro Manibus.

An Incomparable Balsom for the Hands.

<i>Rx. Saponis Veneti ex Succo Limonum diluti,</i>	℔ β.	<i>Rx. Venice-Sope dissolv'd in Juice of Lemons,</i>	℔ β.
<i>Mellis Virginii albi,</i>	℥ ij.	<i>White Virgin-Honey,</i>	℥ ij.
<i>Talci Veneti,</i>		<i>Venetian-Talk,</i>	
<i>Sacchari-Candi, &</i>		<i>Sugar-Candy, and</i>	
<i>Radiciis Ireos subtiliter pulveratorum, an.</i>	℥ β.	<i>Root of Ireos, or Orrice, purely powder'd, an.</i>	℥ β.
<i>Salis Tartari,</i>		<i>Salt of Tartar,</i>	
<i>Boracis, &</i>		<i>Borax, and</i>	
<i>Spermatis Cete recentis, an.</i>	℥ ij.	<i>Sperma-Cete, an.</i>	℥ ij.
<i>Balsami Peruviani,</i>	℥ j.	<i>Peruvian Balsom, an.</i>	℥ j.
<i>Olei Ligni-Rhodii,</i>		<i>Oyl of Lignum-Rhodium,</i>	
<i>Cinnamomi,</i>		<i>Cinnamon,</i>	
<i>Caryophyllorum, an.</i>	℥ β.	<i>Cloves, an.</i>	℥ β.
<i>Moschi Orientalis,</i>		<i>Oriental Musk,</i>	
<i>Ambragrisia, an.</i>	gr. xij.	<i>Ambergrise,</i>	gr. xij.

Cut the Sope small, and put it into a glaz'd Earthen-pot, and dissolve it over a gentle fire in two ounces of Juice of Lemons; then add the Honey, the Sperma-Cete next, with the Balsom: then take the Pot off the fire, and by degrees incorporate the Powders; and lastly, the Musk, Ambergrise, and distill'd oyls.

The Talk is easily powder'd, being first laid before a quick fire for a quarter of an hour, and then beaten in a Mortar heated with a hot Pestle, and then sifted.

This Balsom whitens, cleanses, and smooths the Skin, beyond any paste or Pomatum that can be prepar'd. 'Tis enough to rub the hands with it; nor is there any need of washing afterwards.

Balsamum Sulphuris commune.

Common Balsom of Sulphur.

<i>Rx. Olei nucum juglandium expressi,</i>	℔ β.	<i>Rx. Press'd oyl of Wall-nuts,</i>	℔ β.
<i>Florum Sulphuris,</i>	℥ j.	<i>Flowers of Sulphur,</i>	℥ j.
<i>Salis Tartari,</i>	℥ ij.	<i>Salt of Tartar,</i>	℥ ij.
<i>Vini Albi,</i>	℥ ij.	<i>White-wine,</i>	℥ ij.

Put the Flowers of Sulphur, and the Salt of Tartar, into a small glass-Cucurbit, and pour upon them the Oyl, and the White-wine: mix them well together, and set the Cucurbit over a gentle fire of Digestion for eight hours, stirring the Ingredients from time to time; then augment the fire, and boil the Balsom till the moisture be almost consum'd. Take the Cucurbit from the fire, and when the Cucurbit is cold, separate the Balsom by Inclination from the Fæces, and keep it in a Glass-bottle strong, and close stop'd.

The Salt of Tartar is added to assist the dissolution of the Flowers of Sulphur, and to heighten the red colour of the Balsom.

This Balsom of Sulphur is highly commended to digest, and discuss crude matters gather'd

ther'd together in any part of the body. It is only us'd externally, and it is the Basis of *Emplastrum Diasulphuris*.

Some make use of Oyls of Sweet-Almonds, white Poppy-seeds, or Turpentine, instead of Oyl of Wall-nuts.

Others also that make it a Compound Balsom, add Myrrh, Aloes, Saffron, and several other Ingredients; which since there is no necessity of them, I omit for brevities sake.

Balsamum Sulphuris Anisatum.

Balsom of Sulphur with Anniseed.

R. Florum Sulphuris,
Olei seminis Anisi expressi,

℥j.
℥vj.

R. Flowers of Sulphur,
Press'd Oyl of Anniseed,

℥j.
℥vj.

Put them into a Matrafs, stop it exactly, and set it in digestion over a moderate fire, till the Flowers of Sulphur be almost quite dissolv'd in the Oyl. Take off the Matrafs; and when the Ingredients are cool, separate the Balsom by inclination from the Feces, and put it up in a Bottle well stop't.

The volatility of the Oyl of Anniseed requires that the Matrafs should be well stop't; but you must be careful, in the time of digestion, to shake the substances often to hasten the dissolution of the Flowers.

Distill'd Oyl of Anniseed would do better; but being more volatile, and subject to dissipation, and it being impossible to shut the Matrafs so close, but that the Balsom would be wasted in quantity, we are forc'd to use the other.

Some believe this Balsom little inferiour to natural Balsom, because it moderately heats, and dries, and preserves from Corruption. It is highly recommended in infirmities of the Breast, chiefly against Coughs, Asthma's, Pleurifies, and Ulcers of the Lungs: It is very good against weakneses and indigestion of the Stomach, it restores the Appetite, dissipates Wind. It is highly recommended also against the Pestilence, and all Epidemic Diseases, Venereal Distempers, continual and remitting Fevers. It is taken inwardly in convenient Liquors, from three to ten or twelve drops. For infirmities of the Stomach, and Colics, you may anoint the Stomach and Navel therewith.

Balsamum Arcei.

Arceus's Balsom.

R. Sevi Hircini,
Terebinthina Veneta, &
Gummi Elemmi, an.
Axungia Porci,

℥ij.
℥ij.
℥ij.
℥ij.

R. Goats Grease,
Venice-Turpentine, &
Gum Elemmi, an.
Hogs fat,

℥ij.
℥ij.
℥ij.
℥ij.

Melt the Gum over a very gentle fire, cut before into small pieces; then add the Turpentine, the Goats Tallow, and Hogs Grease; and when they are all well dissolv'd, strain them through a new Cloth, to separate the filth of the Gum, if there be any: When it is cold, put it up for use.

Arceus's Balsom is very much esteem'd and us'd to incarnate and consolidate all sorts of Wounds and Ulcers; as also for Fractures and Dislocations of the Bones, and to heal Contusions, and hurts of the Nerves. This Balsom is very much us'd, though the Receipt be in few Dispensatories.

Balsamum Hispanicum.

The Spanish Balsom.

R. Frumenti integri,
Radicum Valeriana, &
Cardui Benedicti contusarum, an.
Vini Albi,

℥j.
℥ij.

R. Whole Wheat,
Roots of Valerian, and
Bless'd-thistle bruis'd, an.
White-wine,

℥j.
℥ij.

Put them into a narrow-mouth'd glaz'd Earthen-pot, and set it, being close stop't, 24 hours in Maceration; then adding six ounces of Oyl of *S. John's Wort*, boil them

in a hot *Bathum Maria*, to the consumption of the Wine, then strain and press out the whole.

Postea

R. *Thuris electi, subtiliter pulverati,* ʒij.
Terebinth. Venet. ʒviij.

Afterwards

R. Select Frankincense finely pulveriz'd, ʒij.
 Venice-Turpentine, ʒviij.

Melt them together, by degrees, over a gentle fire, and mix them with the aforesaid Oyl; and so the Balsom is made.

Fabricius ab Aquapendente made great use of this Balsom, and with good success; so that some have made him the Author of it. It is wonderfully esteem'd for the cure of all sorts of Wounds, as also which happen to the nervous parts, which some affirm it will cure in four and twenty hours, observing the following directions. First, wash the wound with good cold White-wine, then anoint the wound with this Balsom hot; if the wound be deep, syringe it with the hot Balsom, and bind the sides of the wound with Ligatures, Swaths and Bolsters, anointing at the same time the sides, and round about the wound with the Balsom; then lay upon it a Bolster steep'd in strong Wine, and press'd out again, and upon the top of that another dry one.

Balsamum viride Metensium.

R. *Olei seminis Lini expressi, &*
Olivarum, an. ʒj.
Laurini, ʒj.
Terebinthina Veneta, ʒij.

The green Balsom of Metz.

R. Oyls of Line-seed press'd, and
 Of Olives, an. ʒj.
 Laurel-Oyl, ʒj.
 Venice-Turpentine, ʒij.

Melt them together over a very gentle fire in a Frying-pan; when they are cold, mix therewith by degrees,

Olei stillatisis baccarum Juniperi, ʒß.
Viridis aris subtiliter pulverat. ʒij.
Aloes Succotrina subtiliter pulverata, ʒij.
Vitrioli Albi, ʒjß.
Olei Caryophyllorum, ʒj.

Distill'd Oyl of Juniper-Berries, ʒß.
 Verdigrise finely powder'd, ʒij.
 Aloes-Succotrine finely powder'd, ʒij.
 White-Vitriol, ʒjß.
 Oyl of Cloves, ʒj.

Mix the Powders first, and then add the distill'd Oyls; and when the whole is well incorporated, the Balsom is made.

Schroderus sets down this Balsom in his Book, saying, that Mounseur du Clos, a Physician of Metz, imparted it to him for an Excellent Receipt, as indeed it is, for all sorts of wounds, either by Sword or Bullet, being first wash'd with warm Wine, and then anointed with this Oymntment also warm, laying over all the Stryptic Plaister which I shall hereafter describe. It cleanses, Incarnates and Cicatrizes. It is also singular against the cure of venomous Beasts, and fistulous and malignant Ulcers.

Balsamum Samaritanum.

R. *Olei Communis,*
Vini generosi, an. *Partes aequales.*

The Samaritan Balsom.

R. Common Oyl,
 Strong Wine, an. *Equal parts.*

Boil them together over a very gentle fire in a glaz'd Earthen-pot, to the consumption of the Wine.

This is the Balsom which the Samaritan in the Gospel is said to have made use of; and though it be plain, it is not to be despis'd, being of excellent use to consolidate flight and green wounds.

Balsamum Balsaminæ,

R. *Florum, Foliorum, & fructuum Balsa-*
minæ, an. ʒij.

Balsom of the Balsom-Apple Plant.

R. Flowers, Leaves and Fruit of the Bal-
 som-Apple Plant, an. ʒij.
Radicum

Radicum Consolida majoris,
Aristolochia Rotunda,
Valeriana majoris, an. ℥ ij.
Visci in folliculis Ulmi reperti,

Succi Cancroꝝum fluviatilium,
Foliorum Perwinca,
Sanicula,
Summitatum floridarum Hyperici, &
Galei lutei, an. ℥ j β.
Olei Olivæ, an. lb iij.

Roots of larger Confound,
 Round Birth-wort,
 The bigger Valerian, *an.* ℥ ij.
 The Slime found in the little Bladders of
 the Elm-leaves,
 Juice of River-Crabs,
 Leaves of Perwinckle,
 Sanicle,
 Flowry-tops of S. John's Wort, and
 Yellow Ladies Bed-straw, *an.* ℥ j β.
 Sallet-oyl, lb iij.

Bruise those Ingredients which are to be bruise'd in a Mortar, and put them in a Glass-vessel well stop't; set the Pot twelve days in the Summer-Sun, then boil the Ingredients in a hot Bath, to the Consumption of the moisture; after that, strain and press the whole; and having separated the Oyl from the Fæces, incorporate with it half a pint of distill'd Oyl of Gum-Sandarach.

This Balsom must be kept in a Glass-bottle very close stop't; it is commended for the cure of all sorts of wounds, especially those of the nervous parts. It is very good to cure Burns: It appeases the pains of the Emrods, reunites and consolidates the clefts of the Breasts, especially if you add never so little Camphire. It takes away scars from the Skin, being mix'd with Oyl of Eggs.

Balsamum dolorem levans.

℞. *Foliorum Urtica urentis,*
Plantaginis,
Mercurialis, &
Majorana, an. M iij.
Olei nucis Juglandis expressi, lb x.
Vini-Albi, lb ij.

A Balsom easing Pain.

℞. Leaves of the Burning-nettle,
 Plantain,
 Mercury, and
 Marjoram, *an.* M iij.
 Press'd Oyl of Nutmegs, lb x.
 White-wine, lb ij.

Beat the Herbs in a Marble-Mortar, and put them with the Oyl and Wine into a narrow-mouth'd glaz'd Earthen-pot; cover the Pot, and set it upon the hot Embers for twenty four hours; then caule the Ingredients to boil gently, till the Wine be almost consum'd; then strain and press the whole, and having separated the Balsom from the Fæces, put it up for use.

This Balsom is particularly recommended to appease pains in the Joynts, as well those that proceed from any wound, sting, or bruise, or from the falling of any sharp humour upon any part: It gives present ease by anointing the part, especially if the part be open'd.

CHAP. IV.

Of Embalming of Dead Bodies.

THe Corruption and Stench which arises from the Coffins of Princes, and Great Personages, though Embalm'd after their Decease, has given me occasion to believe, that such accidents could not proceed, but either from the carelessness or ignorance of those that undertake the Embalming: And therefore I have here made bold to impart to public view, that method which I have observ'd in Embalming the Bodies of several considerable Persons of both Sexes, and of some Princes also; to the end, that they who have care of their Reputation, and will spare nothing to acquit themselves with an Honesty becoming their Employment may find success.

It is not necessary that I should here dilate upon the manner of Embalming Bodies, which the Egyptians and other Nations made use of heretofore, and of which many Authors have written; among the rest, *Peter Belon*, of the Country of *Mary*, in a Treas-

tise entitl'd, *De Medicato Funere*; Printed at *Paris* in the Year 1553. For though we meet with Remarkable Evidences of the Art of the Ancients in this particular, yet we are ignorant both of the Ingredients and Quantities which they made use of.

The Name of *Mummy* is giv'n to Bodies Embalm'd with Aromatic Drugs, or else to such as are cover'd and dry'd in the Sands of *Lybia* by the heat of the Sun; sometimes also to the Liquor, which flowing from the Coffins of great Princes Embalm'd, dries in the Sepulchre, and becomes as hard as the Embalm'd Flesh.

The Corruption of Dead Bodies, proceeding from their superfluous moisture, augmented by that of the Ambient Air, there is therefore great care requir'd to consume and suck up that superfluous moisture, and to prevent the Air from entring in. Quick-Lime is very fit to consume the moisture of dead bodies, and to hinder the penetration of the Air; but because it is apt to consume the soft parts of the Flesh, and to leave only the Skeleton, it is not to be meddl'd withal, but where there is an intention only to preserve the bones of the body. Dead bodies also disimbowell'd, may be preserv'd in a strong Pickle, or in Spirit of Wine well rectifi'd, providing a fit Vessel that may be close stop't; but because that is only for a time, and that more lasting means are requir'd, some persons perhaps may not think their time ill spent to find them here.

The Aim which I have always had to preserve the external shape of the dead body, especially of the Face, and that to Perpetuity, has ever kept me from making use of Oak, Bark, Ashes, or Lime, which they too frequently make use of, that prefer their Gain before their Reputation. For though that Bark-dust, dry enough of it self, seem very proper to suck up superfluous moisture, it is unable to communicate of it self any good quality to the dead body wherein it is put, but is rather subject to the putrefaction of the moisture which it has suck'd. As for Ashes, though the Salt which they contain is esteem'd very fit to preserve the dead bodies, yet there is not enough; so that it rather serves to dissolve the fleshy and fat parts, then to hinder their corruption. I shall therefore set down those ways, which by Reason and long Experience I have found most proper, and which Mounseigneur D' *Aquin*, his Majesties Chief Physitian, desir'd me to impart to public view.

Though it might be expected that dead bodies might be preserv'd in a Coffin of Lead, wrapt up in a Powder compos'd of equal parts of Myrrh, Aloes, and Specific Salts, not sparing for Powder, nor good Spirit of Wine, and sodering up exactly the Joyntures of the Coffin, as once I did for a Lady of Great Quality, who so order'd it before her death; yet the most sure and certain way is this.

Open the Scull behind, about the breadth of the palm of the hand, or thereabouts; and having taken out the Brain, and fill'd and stuff'd the Scull with the Powder after-mention'd, clap on the piece again, and sew it fast.

Then make an Incision of the skin, and fatty part, from that part of the Breast, where the Ribs meet below the Navel, and another Incision a-cross, in the same skin and fat part, about a foot and a half long, so as to lay open the Region of the Liver, Spleen, and Stomach; and having separated the whole from the *Sternum* with a Razor, on both sides in the Muscilaginous parts, and rais'd the *Sternum* against the face of the body, take out the Tongue, the Eyes, the Lungs, the Heart, the Liver, the Spleen, the Stomach, the Intestines, and all the parts contain'd in the hollow of the body: Make also two or three Incisions all along in each Arm, and each Leg, according as the body is more or less fat and fleshy. Make also more and deep Incisions in the Buttocks and Thighs, and from the Neck to the Buttocks in the Back, separating the skin and the fat parts with a Razor; make also five or six in the Neck, and two in the soles of each Foot, and the palms of each Hand: Some bodies are so fat and fleshy, that you must be forc'd to pare off some part of the fat and flesh, and mingle them with the Entrails, though there's no necessity for it, where Cost is allow'd.

After you have well suckt up the blood and serosities with Sponges, bath and wash the parts with good Spirit of Wine, and then rub them with good Spirit of Salt: Then fill every hole and Cranny, all the spaces between the fat skin and the flesh, the Mouth, the Throat, the Eye-holes, and Nostrils, with the following Powder.

**Pulvis ad implendas Cadaverum
Cavitates.**

R. Myrrha,
Aloes,
Salis Tartari, &

℥ xvj.

**A Powder to fill the Concavities of
Dead Bodies.**

R. Myrrh,
Aloes,
Salt of Tartar,

℥ xvj.

Tamarisci

Tamarisci,
 Asphalti,
 Summitatum siccum Absinthii,
 Scordii,
 Centauris minoris,
 Radicum siccum Imperatoria,
 Gentiana,
 Angelica,
 Carlina,
 Aristolochia rotunda, an.
 Cardamomi Vulgaris,
 Piperis Longi,
 Zinziberis, an.
 Cinnamomi,
 Caryophyllorum,
 Labdani,
 Acori veri, an.

℥ iij.

℥ iij.

℥ ij.

Tamarisk,
 Asphaltum,
 Dry tops of Wormwood,
 Water-Germander,
 Lesser Centaury,
 Dry'd Roots of Master-wort,
 Gentian,
 Angelica,
 Carlina-thistle,
 Round Birth-wort, an.
 Vulgar Cardamom,
 Long Pepper,
 Ginger, an.
 Cinnamon,
 Cloves,
 Labdanum,
 True Acorus, an.

℥ iij.

℥ iij.

℥ ij.

All this Powder will be but little enough if the body be large, and that you Embalm all the Entrails; for you must not leave the least Cavity unfought, but fill every corner, and every vacuity, as full as the skin will hold; then sprinkle the Powder, with good Spirit of Wine, to the end it may imbody; and having sow'd up the skin where it was open'd, anoint the whole body with Peruvian Balfom, and strew as much Powder upon it, as will make a Crust about a fingers-breadth thick.

Pulvis ad Cadavera Loricanda.

R. Stryacis,
 Benjamin.
 Ireos Florent. an.
 Summitatum Marjorana,
 Florum Arantiorum, &
 Lavendula,
 Tacamahacca odorata, an.
 Ligni Rhodii,
 Acori veri, an.
 Labdani,
 Cassia Caryophyllata, an.

℥ iij.

℥ ij.

℥ j.

℥ β.

A Powder to put up Dead Bodies.

R. Storax,
 Benjamin,
 Florence-Orrice, an.
 Tops of Marjoram,
 Flowers of Oranges, and
 Lavender,
 Odoriferous Tacamahacca, an.
 Lignum-Rhodum,
 True Acorus, an.
 Labdanum,
 Cassia perfum'd with Cloves.

℥ iij.

℥ ij.

℥ j.

℥ β.

Strow this Powder over the whole body, anointing it first with Balfom of Peru, till it come to be about a finger thick; then wrapping the body up in a Sear-cloth, and putting it up in a Leaden-Coffin, you may carry it as far as you please, and preserve it to Eternity.

If the design be to keep the body for some time, or to shew it for some Weeks in a Bed of State with the face uncover'd, the body apparell'd, and with Gloves and Shoes on, prepare a white Linnen odoriferous Sear-cloth, which must be cut into long Swathes, three or four fingers broad, with which the Arms, Legs and Thighs must be swath'd by themselves, and afterwards the whole body, applying the Swathes sloping upon the Powder; by this means you may cloath the body as if it were living, comb out the hair, and keep the face cover'd, provided you be careful to wash it often with Spirit of Wine well rectifi'd, and to lay upon it Linnen-cloaths, dipt in the same Spirit, at such times as the Corps is not publickly expos'd. You may also fill a Pillow full of the Aromatic Powder last describ'd, and put it under the head of the body, and lay other little Cushions by the sides, and at the feet of the said body.

Tela Cerata Aromatica.

R. Cera Alba,
 Olei expressi nucis moschata,
 Oleorum stillatiorum Lavendula,
 Corticis Arantiorum & Citri, an.

℥ vj.

℥ ij.

An Aromatic Linnen Sear-cloth.

R. White Wax,
 Press'd Oyl of Nutmegs,
 Distill'd Oyls of Lavender,
 Orange and Citron-peels, an.

℥ vj.

℥ ij.

Melt

Melt the Wax over a very gentle fire in a Tin-Bason, large above, and narrow below; then having well mix'd the Oyls, dip therein a fine Linnen-cloth equally spun.

As for the Brains and Internal parts, you may Embalm them with the first Powder. To which purpose, having wash'd the Intestines, and made long and deep Incisions in the Heart, Lungs, Liver, Spleen and Kidneys, and made ready a Leaden-Barrel, cover the bottom with a good quantity of the Powder; then range the Intestines well fill'd with the Powder one by another, not sparing to fill all the Concavities between them with the Powder, till the Barrel be quite full: then soder up the Barrel exactly, by which means all those parts will turn into a Mass, fit to be preserv'd as long as the Barrel itself. You may also, if you are so desir'd, put the Heart in a Leaden-box by it self.

Nor will the body be less preserv'd, if after it has lain in State as long as is requir'd, you rub the uncover'd parts with Balsom of *Pern*; and then strowing the Powder upon them, cover them up with the Sear-cloth, and so put the body into a Coffin well soder'd.

CHAP. V.

Of Oyntments, Liniments, and Sear-cloths.

Oyntments, Liniments, and Sear-cloths, are compound Medicaments, principally appointed for Unctions and exteriour applications upon divers parts of the body. Liniments, Unguents, and Sear-cloths, differ chiefly in their consistency, of which Unguents keep the middlemost. Oyls are the usual Foundations of Oyntments, Liniments, and Sear-cloths: To them are added Wax, Greases, Tallows, divers parts of Plants, Animals, and Minerals, as well for the vertues which they afford them, as to give a consistence to the Oyls, and to compose the Remedies which by a long stay upon the place affected, may communicate their vertue to it: Not but that Liniments and Oyntments may be compos'd of several sorts of Fats and Greases, without Oyl or Wax, as among the rest Pomatums are made, and sometimes without Oyl, without Fat, or without Wax, as *Unguentum Egyptianum*: But you shall meet with many more Oyntments, of which Oyl is the chief Foundation, and which receive their consistence from Wax, then which are made without either Oyl or Wax. But a true Sear-cloth cannot be made without Wax, as being that which gives it its Name.

The ordinary proportion of Oyl and Wax in the Composition of Oyntments, is three ounces of Wax to twelve ounces of Oyl; and if you are to mix any Powders, you may put in from one ounce to two, and sometimes you may exceed the proportion. In the Composition of Sear-cloths, four ounces of Wax are put to twelve ounces of Oyl; but for Liniments, two ounces of Wax is enough for twelve ounces of Oyl. But regard must be had to the Season, for in Summer you must put in something more Wax than in Winter. And because that Oyntments contain also in them Rosins, Tallows, Sucts, and Gums, which are partly put in the place of Wax, the Artift must be very skilful in rightly proportioning and mixing the Ingredients, that the consistence may be true, and tightly to the Eye; and which is more then all, in governing his fire, according to the nature of the Oyntments: For all which things, observe the following preparations.

Unguentum Rosatum.

R. Axungia Porci Masculi purgata & sapius lota,
Rosarum rubrarum recentium confusarum,
an. ℥ iij.

Oyntment of Roses.

R. Barrow's-grease cleans'd, and often wash'd,
Fresh Red-roses bruised, an. ℥ iij.

Put the Grease and the Rose-buds into a narrow-mouth'd glaz'd Earthen-pot, cover it well, and set it in a Bath, between luke-warm and boiling, for six hours; then cause the Bath to boil for an hour, and having strain'd and strongly press'd out the whole, mix with the strain'd Oyntment,

Rosarum

Rosarum pallidarum recentium contusarum,
℥. iij.

Pale Roses newly blown, fresh gather'd,
and bruise'd, ℥. iij.

Stop the Pot again, keep it in a Bath between luke-warm and boiling-hot for six hours, and after that let it boil a good long hour; then strain and press out the whole again with a good strength: Separate the Oyl from the Feces, and put it up.

If you desire to give the colour of the Roses to the Oyntment, about a quarter of an hour before you strain it the last time, throw in two ounces of the Roots of Alcanet, or somewhat more, if you intend to height'n the colour, and stir a little in the Oyntment: If you would keep the white colour of the Oyntment, and the sweet scent of the Roses, make use of Damask-Roses, without any Alcanet.

Though the Receipts of *Unguentum Rosarum* in the Dispensatories be all very near the same with that which *Mesue* has left us, and that the Zealots of Antiquity may keep to them, without erring in their Profession; yet we do not find it to be much follow'd by the Apothecaries now a-days, for every one prepares this Oyntment after their own method: Some make use of Roses blown, others only of the Blossoms; some make use of red, others pale Roses; some prefer the white, others the Damask-Roses: Others put in the Roses whole, others bruise them: others after they have mingl'd the Roses and Boars-grease together, expose them to the Sun to macerate. But leaving every one to his own judgment, I shall only add this, that the Receipt here set down is not inferiour to any, either for vertue, or good scent.

It is agreed, that Barrow's-grease is more firm, and to be preferr'd before that of Sows. The Skins and Tunicles must be pick'd out, and the fat wash'd with clean water, then melted in a glaz'd Earthen-pot, and strain'd from time to time through a clean Linnen-cloth, in order to the preparation of the Oyntment.

You may, in imitation of the Ancients, add a sixth part of the weight of Oyl of Sweet-Almonds, if you would give it the consistence of a Liniment; but there are few persons that had not rather that the oyntment should have its true solidity. You may also make use only of the red Roses; but certain it is, that the pale Roses here prescrib'd, render the Oyntment more odoriferous.

An Oyntment of Roses may be also made without fire, as Pomatum's of Jasmin are prepar'd. Take two Galley-pots, large and flat, pour into each of them melted Barrow's-grease well wash'd and prepar'd, as for ordinary oyntment of Roses, so that there may be left in the hollow of the Pots the thickness of a small fingers breadth. Fill the vacancies of the two Pots with Damask-Rose leaves gather'd early in the morning, and newly blown; then covering the Pots one with the other, set them in a Cup-board close shut, and keep them there till toward Evening: then throwing away those Roses, put fresh in their places; and covering the Pots, as before, leave them till next morning. Continue doing thus, till you perceive the Grease to be sufficiently impregnated with the scent of the Roses, and you shall have an Oyntment very white, and very odoriferous, which may bear the name of Pomatum of Roses, and must be kept in a Glas or Galley-pot close stop'd. In the same manner may be prepar'd Pomatums of Violets, Gilloflowers, and all sorts of odoriferous Flowers.

Oyntment of Roses is very much approv'd against all sorts of external Inflammations, particularly Flegmons, Erysipela's, and Tetters; against the pains of the Head, to provoke sleep gently, temper the heat of the Stomach, Liver and Kidneys, appease the pains of the Emrods, to disperse heat in the Face, and to cure Pimples and little Ulcers that happen therein; as also to repress sharp serosities, to suppress inflammations in the Private Parts of Men or Women, and to cure the heats and pimples that usually torment Children in their Swadling-cloaths. *Unguentum Rosarum* is also us'd for the Basis of Oyntments, and Pomatums for the Itch.

Unguentum Album, five de Ceruſſa.

White Oyntment, or Oyntment of white-Lead.

℞. Oyl of Roses,
Cera Alba,
Ceruſſa Veneta,
Camphora,

℥. iij.

℥. ix.

℥. j.

℥. j. ℞.

℞. Oyl of Roses,

White Wax,

Venetian-Ceruſſe,

Camphire,

℥. iij.

℥. ix.

℥. j.

℥. j. ℞.

Make

Make choice of very white Venetian Ceruse, weighty and brittle, and pulverize it, by rubbing it upon the bottom of a Hair-sieve reverst, receiving the Powder upon a paper underneath: then putting the Powder into an Earthen-Pipkin, large enough, wash it several times in clean water often chang'd, stirring the Powder with a wooden-Spatula, and pouring out the water by inclination, when the Powder is settled at the bottom.

When the water grows insipid, wash the Ceruse at last with Rose-water, leaving it in the water for five or six hours; at the end whereof, pour it out by inclination, and dry the Ceruse in the shade upon a paper: Then put the Wax broken, and the Oyl, into a glaz'd Earthen-pot, and set the Pot in a boiling-Bath. When the Wax is melted, take the Pot from the fire, and stir the dissolution with a wooden-Pestle, till it begins to thicken, at which time mix the Ceruse in Powder, stirring the Oyntment till it be almost cold. Melt the Camphire in a small portion of the Oyl, and incorporate it with the Oyntment when it is cold.

You may also, if it be desired, at the same time add the Whites of Eggs, being careful to stir the Oyntment, to make an exact mixture of the Ingredients.

This Oyntment is in all Dispensatories, but the quantity of the Medicaments is very different, not only in reference to the proportion of the Oyl with the Wax, but also for that of the Ceruse. As to the proportion of the first, I find it conformable to the general Rules of Oyntments; but that of the Ceruse cannot pass for other then irregular, though I yield to it here, as well for that the quantity is not over-large, as because it is that which chiefly gives its colour and principal vertue to the Oyntment.

Nor can I agree with them, who instead of washing the Ceruse with water, boil it with Vinegar distill'd, and having dry'd it, make use of it in this Oyntment: For I know that Vinegar distill'd will open it, and reduce it to an Acid-sugar-like, white, Chrystalline substance, in appearance like Salt; and that also by long digestions, separations, and superfusions of the Vinegar distill'd, you may reduce all the Ceruse into a kind of Salt. But this Salt is not a true Salt of Ceruse, but rather a Salt of Vinegar, incorporated with the Ceruse which it has dissolv'd: And besides that, this Vinegar distill'd being consum'd among the Ceruse, cannot make any separation of its parts, as being confus'd with the total of the Ceruse at the time it is dry'd: Certain it is, the Ceruse is so far from being the more cooling, that it fails not to retain great impressions of the Acrimony of the Vinegar: which induces me to prefer the Lotion of Ceruse, before the boiling it in Vinegar distill'd, as some of our Moderns have directed. For though the addition of Vinegar distill'd might take place, were this Oyntment prepar'd for the cure of Ulcers proceeding from a salt, burning choler, or some fix'd or volatile salt, in hopes that the Acid of the Vinegar might dulcifie those salt substances by joyning strictly with them; yet we must not look for such an effect from Ceruse boil'd with Vinegar, after the Flegm and the Acid of the Vinegar are dissipated, because that in their room there remains only in the Ceruse the fix'd salt, and corrosive of the Vinegar: whereas I have great reason to believe, that the Ceruse, being freed by Lotions from all the Acrimony of the Acids which had reduc'd it into a Calx, and from all the ill impressions of the fire which it might have contracted, is very fit to suck up and mortifie the cholic and salt humours, as also the Acids which may have caus'd the Ulcers. However this hinders not, but that when the nature of the humour which causes the Ulcers is understood, we may have recourse to Specifics, and use them either apart, or mix'd with this Oyntment, as occasion and judgment require.

As to what some object, that the Lotion of the Ceruse may carry off some part of the Sugar-like salt dissolv'd by the Vinegar, when the Lead was reduc'd into Ceruse; I say, that can only be some very little part of the Ceruse fix'd to some remainder of the Salt of Vinegar, the loss whereof cannot but prove advantageous, by reason of the acrimonious parts joyn'd with it. I also affirm, that Ceruse coming out of Calcination, is not a substance dissolveable in water; nor is there any fear, that either the common, or Rose-water, should deprive it of any part of its proper substance, in regard it can only be dissolv'd by Vinegar, or by some other corrosive; and that it is only by their means that it takes the Figure of Salt, or of Vitriol of Ceruse, which is merely a dissolution, mixture and corporification of its substance with the corrosive Spirits, since the Lead may be separated from the same Salt, and the same Lead be again reduc'd into Ceruse, and thus metamorphos'd as often as you please.

As for the Whites of Eggs prescrib'd in several Receipts of this Oyntment, I think they may be better mix'd when there is any occasion; and that it is better to let them alone

alone in the preparation of this oyntment, which is to be kept for some time, but will be putrifi'd by the Whites of Eggs. It may not be amiss also, to prepare this oyntment without Camphire, and to mix it only upon occasion, by reason of the aversion which some have against the ill scent.

This oyntment is good to cure Erysipela's, Burns, Scurfs, and the most part of deformities of the Skin, which proceed from salt slegm, or burning Choler. It is also very proper to allay the Itch, and hot intemperature of Ulcers: it dries up galling and peelings of the skin, the rednesses which happen to Children, upon their Thighs, and in other places: It is also good for bruises, and to consolidate slight wounds; for it cools, closes, dries, and manifestly cicatrizes where it is apply'd.

Unguentum Populeum.

Oyl of Popler.

Rx. Gemmarum Populi nigrae contusarum, ℥ i. β.
Axungia Porci masculi, ℥ iij.

Rx. Buds of black Popler bruise'd, ℥ i. β.
Barrow's-grease, ℥ iij.

Gather the Popler-buds when they begin to open, and shew the points of their leaves; bruise them well in a Marble-Mortar, then melt the grease over a gentle fire in a glaz'd Earthen-pot large enough, and mingle the Buds with it; stop the Pot close, and put it in a Cellar, or cool place, till the Months of May or June, that all the Herbs are fit to be boil'd; then set the Pot in a boiling Bath, and mix therewith

Foliorum contusorum Violariae,
Umbilici Veneris,
Rubi,
Papaveris nigri,
Mandragerae,
Hyoscyami,
Solani,
Lactucae,
Semperivi majoris, & minoris, &
Bardanae majoris, an.

℥ iij.

Bruis'd Leaves of March-Violets,
Kidney-Wort,
Bramble,
Black Poppy,
Mandrake,
Henbane,
Night-shade,
Lettice,
Greater and lesser Houleek,
Greater Burdock, an.

℥ iij.

Let them boil with the same heat, stirring them from time to time, and covering the Pot again, till the moisture of the Herbs be almost consum'd; then take the Pot from the Bath, strain and press out the Ingredients with a good strength, and when the liquor is cool, separate the Oyl from the Feces, and keep it close stopp'd.

Some expose the first Infusion of the Popler to the Sun; but a cool place seems more proper for an oyntment which is requir'd to cool, considering that there is no more intended then to preserve the virtue of the Poplers, till the other Herbs can be provided, the Night-shade being a late Herb.

Some there are that add Wine to the Oyntment while it is boiling, others Juice of Night-shade, and Rose-water: But if you are careful to get all the Herbs ready at a time, and to have them fresh, they will afford moisture sufficient to boil the oyntment, and there will be time enough to charge it sufficiently with the colour and virtue of the Simples. Others would have the Herbs to lye in Maceration eight or ten days, before the oyntment be boil'd. But that would be time spent in vain, because that fresh Herbs well bruise'd, impart their virtue sufficiently, during the time of their boiling, without any necessity of Maceration before-hand, either upon, or off the fire; and for that the Rosiny part of the Popler-buds dissolving easily in the oyntment, impart their whole virtue at the same boiling.

As to the Opinion of some, that all the Ingredients of this Oyntment are cold, it cannot be so thought, in regard that the taste and Aromatic smell of the Popler-buds, and their resinous and combustible part demonstrate them to be hot, as well as the Burdock. However, that hinders not this oyntment from being properly number'd among the cold oyntments, since the hot Plants hinder not the cooling virtue of the principal Ingredients, but rather assist their penetration: Considering that Remedies which are accounted purely cold, being us'd alone, produce not those good effects as when mix'd with some hot Medicine, though but in a small quantity. We observe also, that very hot Remedies are sometimes successfully made use of for the cure of Burns;

as Spirit of Wine, and Juice of Onyons, instead of this Oyntment, which is so highly approv'd for that intent.

Oyl of Poplar alone, or mix'd with Oyl of Roses, apply'd upon the Forehead and Temples, provokes sleep gently, allwages the pains of the Head in Fevers, and tempers the heat of them, being laid to the Wrists, or to the soles of the feet. It is us'd to abate the Inflammations of the Reins, and to cure Burns, Erysipela's, and all sorts of heats, and to discufs the Milk in the Breasts; to which purpose it is mix'd with Honey, yellow Wax, and many other Medicaments.

Unguentum Pompholygos.

Rx. Olei Rosati, \mathfrak{z} xx.
Succi Granorum viridium Solani, \mathfrak{z} viij.

Oyntment of the Soyl of Brass-Oar.

Rx. Oyl of Roses, \mathfrak{z} xx.
Juice of the green Berries of Nightshade, \mathfrak{z} viij.

Bruise the Nightshade-Berries in a Marble-Mortar, press out the Juice, and put the quantity prescrib'd, with the Oyl of Roses, into a glaz'd Earthen-pot; cover the Pot, and boil them together till the Juice be almost wholly consum'd; separate the Oyl, throw away the Feces,

Deinde in oleo liqua

Cera Alba, \mathfrak{z} v.

Then Melt in the Oyl

White Wax, \mathfrak{z} v.

After that, take the pot from the fire, stir the oyntment with a wooden-Pestle till it begins to thicken; and when it is well cold,

Refrigeratis permisce

Cerusa lota pulverata, \mathfrak{z} iiij.
Plumbi leviter usi & pulverati,
Pompholix vel Tutia Alexandrina preparata, an. \mathfrak{z} ij.
Thuris subtiliter pulverat. \mathfrak{z} j.

Mix therewith

Ceruse wash'd and powder'd, \mathfrak{z} iiij.
Lead slightly burnt and reduc'd into Powder,
Soyl of Brass-Oar, or Tutia of Alexandria prepar'd, an. \mathfrak{z} ij.
Frankincense finely pulveriz'd. \mathfrak{z} j.

Stir the Oyntment till it be quite cold, and then put it up.

The Receipt of this Oyntment agrees in most Authors as to the number and names of the Ingredients, but the doses are very various. But this Receipt is regular in all things, and you cannot fail of a right preparation, observing this method.

As to the preparation of the Lead, take a large Iron Ladle, and melt in it about a pound of Lead, stirring it from time to time with a long Iron Spatula, till it be reduc'd into a greyish Powder, which you must sift through a Silk-sieve, till you have the quantity prescrib'd.

Pompholix is a white light Powder that sticks about the tops of the Furnaces where they melt and refine Copper, like Flower of Meal, and sometimes in little Poulces, or Blisters. They call it also Nil, and Nibili. Tutia comes from the same Copper, and at the same time as Pompholix: But the weight of it causes it to stick about the lower part of the Furnaces, where it gathers together about the thickness of a half Crown, like grains at the top, and of a dark Ash-colour. 'Tis thought that the vertues of Tutia and Pompholix are very much alike, as both arising from Copper, but the true Pompholix is certainly to be preferr'd by reason of its lightness. The Greeks call Tutia by the name of Spodium, which the Arabians have given to the Roots of Reeds burnt, and some of our Moderns to burnt Ivory.

To prepare Tutia right, it must be heated red hot in a Crucible, and quench'd as often in Rose-water, after which grind it upon Porphyry, till it be scarce to be felt.

Oyntment of Pompholix cools and extinguishes the heat of Ulcers, tames their malignity, appeases their pain, cleanses and heals them all together, especially those of the Legs.

Unguentum

Unguentum Ophthalmicum.

An Oyntment for the Eyes.

℞. Butyri recentissimi,

℥ xvj.

℞. Newest Butter;

℥ xvj.

Melt it in a Copper or Latten Frying-pan over a very soft fire, till the Butter ceases to spatter; then by degrees, and at several times, mingle with the Butter

Aceti Rosati acerrimi,

℥ iiij.

Sharpest Vinegar of Roses,

℥ iiij.

Boil them again over the same fire till the Butter cease to spatter; pour the whole into a Brass-Mortar, and

Mingle with it

Tutia Alexandrina ter in Aqua Rosarum
extincta & preparata,

℥ iiij.

Tutia of Alexandria thrice quench'd in
Rose-water, and prepar'd,

℥ iiij.

Stir the whole continually, till the Oyntment be cold.

The reason why you must pour the Vinegar upon the Butter by degrees, and when it ceases to spatter, is because that if you should pour it too hastily upon the Butter, it would cause so great an Ebullition, that the Butter would run over, and be lost; which it will not do, if you observe these Directions.

They who consider, that in making Butter for ordinary use, there is no way so to separate the serous and Cheesie part, but that some portion will remain in the Butter, which will be offensive in oyntments prepar'd for the eyes, will not wonder that the Butter should be thus prepar'd, to consume the serous part by boiling the Butter, and stopping the Cheesie part in the Strainer, which could not be done by Lotions, or any other way. Besides, the oyntment prepar'd with Butter thus boil'd, will keep a long time, and is less subject to smell with age.

As for the addition of Vinegar, and boiling the Butter in a Copper or Latten Frying-pan, there is no fear that the oyntment should thereby receive any offensive quality. For besides that after the moisture of the Vinegar is consum'd, the Earthy part remaining in the Strainer with the Cheesie part of the Butter, the oyntment receives a vertue very proper to strengthen the Eyes, it becomes fit to cleanse, by means of the particles of Copper or Latten with which the Butter is impregnated by means of the Vinegar which dissolves them, and of which there is no danger, since the Tutia, which is the foundation of the oyntment, is a production from Copper, and Verdigrease, which is the rust of Copper, are successfully made use of in infirmities of the Eyes; as also Vitriol, whose natural Corrosion is augmented by the particles of Copper, with which it is impregnated in the bowels of the Earth: Upon which this observation is to be made, that although the Eyes are very sensible and tender parts of the body, yet they easily endure those things which neither the Stomach nor the Tongue can bear, such as are divers Remedies drawn from several Minerals, and several parts of Plants and Animals, when they cannot endure oyl which we daily make use of in Diet.

We find in several Authors descriptions of Ophthalmic oyntments, and several persons have several particular Receipts which I cannot find fault with: But I can assure them of the Excellency of this oyntment, by the long Experience I have had of it, and the daily tryals which I make of it. It is a wonderful Remedy to allay the Inflammations, to appease the pains and itching of the Eyes, and to cleanse and cicatrize the Pustula's of the Eyes and Eye-brows. It is highly approv'd to dry up blear Eyes, especially in old people, and to stop and dry up defluxions that cause blearness, and to prevent the Eye-brows from sticking one to another. The Patient going to bed, is to put into the corner of the Eyes about the quantity of a little Pea, and at the same time to shut his Eyes till the oyntment be fully melted. At first it will cause a smarting in the Eyes, but it will presently be gone. Tryal will certainly confirm what I say to be true.

Unguentum Nutritum.

℞. Lithargyri Aurī subtiliter pulverat. ℥℥.

Aceti fortis,
Olei communis,℥ viij.
℥ j ℥.

The Nourish'd Oyntment.

℞. Litharge of Gold finely powder'd,

℥℥.

Strong Vinegar,
Common Oyl,℥ viij.
℥ j ℥.

Having pulveriz'd the Litharge, stir it a long time in a large Brass-Mortar, with as much Oyl as will serve to moisten it moderately; and when they are well incorporated, add a little Vinegar, and continue stirring till the Vinegar appear no more; then put in more oyl, still stirring the oyntment: and so continue to add, first Vinegar, then Oyl, by little and little successively, till the Litharge have suck'd up the prescrib'd quantity of both, and that both have acquir'd the due consistence of an oyntment: and in regard the Oyl exceeds the Vinegar, put in every time more Oyl than Vinegar. Due patience, and continual stirring, will not only bring it to a due consistence, but to a whiteness like that of Ceruse-Oyntment.

Nourish'd Oyntment is also call'd *Crudum*, or *Raw*, because it is not boil'd; and *Oyntment of Litharge*, because Litharge is the Foundation; and *Triapharmacum*, or a Medicine of Three, because it is compounded of three Ingredients.

As for those that chuse to prepare and stir this Oyntment in a Leaden-Mortar, pretending to augment its vertue, I think they rather do ill then well; since Litharge being only Lead Metamorphos'd, mixing with the oyntment, affords it that vertue which is to be expected from Lead abundantly enough, without seeking after an Imaginary Vertue from the touch of the Mortar; besides that the bad colour which the Lead will give it, may be sufficient to divert an Artift from any such course.

They that will make a dissolution of Litharge in Vinegar, may quickly, and without trouble, get ready an *Unguentum Nutritum* of a good consistence, and at least as effectual as that which I have set down, by incorporating cold the dissolution with an equal quantity of Honey. You may also equally dissolve in Vinegar, Minium, and white Lead, and mix the dissolutions with the oyl; but these oyntments soon putrifie, because of the Aquosity of the Juices: So that they are never prepar'd, but upon occasion.

Nourish'd Oyntment is good to mortifie Scabs, Tettors, and other Infirmities of the Skin. It is also us'd for the cure of Ulcers, particularly those which are caus'd by salt flegm; because that the Litharge joyn'd to the Acid of the Vinegar, fixing upon the salt humour, mortifies it, and cicatrizes the Ulcers. This Oyntment cools and dries very much: It may be kept several Months, if well prepar'd.

Unguentum desiccativum Rubrum.

A red drying Oyntment.

℞. Olei communis,
Cera Alba,℥ ij.
℥ ℥.℞. Common Oyl,
White Wax,℥ ij.
℥ ℥.

Melt them together over a gentle fire; take them off, and stir them together with a wooden-Pestle till they begin to thicken; and when they are half cold, add the following Powders.

℞. Lapidis Calaminaris, &
Bolis Armeniæ, an.
Lithargyri Aurī, &
Cerafe Venetiæ, an.
Camphire,℥ iij.
℥ iij.
℥ j.℞. Calaminaris-Stone, and
Bole-Armoniack, an.
Litharge of Gold, and
Ceruse of Venice, an.
Camphire,℥ iij.
℥ iij.
℥ j.

Grind the *Lapis Calaminaris* and *Bole-Armoniack* upon a Porphyry, sift the Ceruse through a Hair-sieve revers'd, and pulverize the Litharge very fine, and mix all the Powders with the oyntment, stirring it continually till it be quite cold: Then add the Camphire pulveriz'd, with a drop or two of Spirit of Wine, and the Oyntment is made.

This

This Desiccative Red Oyntment, though much in use, is left out however by many Authors; neither have they that mention'd it, observ'd the proportion of Quantities: For should we put five ounces of Wax to one of Oyl, as the Ancients direct, the Oyntment would be of too solid a consistence; and therefore we have regulated the proportions of the Wax and Oyl as for other Oyntments, putting in but one part of Wax to four parts of Oyl; by which means the Wax and the Oyl will easily suck up the Powders, notwithstanding the largeness of their quantity, and make this Oyntment far more solid then the usual sorts of Oyntments.

This Oyntment cools, dries, strengthens and closes. It also stops desfluxions that fall upon the parts, and digests and consumes the superfluous moisture of Wounds and Ulcers which it cicatrizes.

Unguentum Strypticum.

<i>R. Olei communis,</i>	<i>℥ iij.</i>
<i>Myrtillorum siccorum contusorum,</i>	<i>℥ i β.</i>
<i>Aluminis Rupei.</i>	<i>℥ β.</i>
<i>Succi Myrtillorum, &</i>	
<i>Sorborum immaturorum, an.</i>	<i>℥ j.</i>

The Restrictive Oyntment.

<i>R. Common Oyl,</i>	<i>℥ iij.</i>
<i>Whortle-berries dry'd,</i>	<i>℥ i β.</i>
<i>Roch-Alum,</i>	<i>℥ β.</i>
<i>Juice of Whortle-berries, and</i>	
<i>Green-Services, an.</i>	<i>℥ j.</i>

Put the Whortle-berries into a large Earthen glaz'd pot, and pour in the oyl prescrib'd: then put the Alum dissolv'd in the Juices, together with the Juices; and having cover'd the Pot, set it in a boiling-Bath till the moisture be almost quite consum'd: then strain, and strongly press out the whole; and having separated the Oyl from the Feces,

<i>R. Olei illius,</i>	<i>℥ iij.</i>	<i>R. Of that same Oyl,</i>	<i>℥ iij.</i>
<i>Cera Alba,</i>	<i>℥ ix.</i>	<i>White Wax,</i>	<i>℥ ix.</i>

Melt the Wax in the same Pot in the same Bath: Then take off the Pot, stir the oyntment with a wood'n-pestle; and when it begins to thicken, and grow half cold,

<i>R. Nucum Cupressi,</i>		<i>R. Cypress-Nuts,</i>	
<i>Myrtillorum,</i>		<i>Whortle-berries,</i>	
<i>Balaustiorum,</i>		<i>Pomgranate-flowers,</i>	
<i>Corticum Granatorum, &</i>		<i>Rinds of Granates, and</i>	
<i>Glandium,</i>		<i>Acorns,</i>	
<i>Acinorum Uva,</i>		<i>Grape-stones,</i>	
<i>Offis e crure bovis calcinati,</i>		<i>Bone of an Oxes Thigh calcin'd,</i>	
<i>Granorum Sumach,</i>		<i>Grains of Sumach,</i>	
<i>Mastiches,</i>		<i>Mastich,</i>	
<i>Acacia,</i>		<i>Acacia,</i>	
<i>Aluminis ussi, &</i>		<i>Burnt-Alum, and</i>	
<i>Corticis mediani Castanearum, an.</i>	<i>℥ vj.</i>	<i>Middle-rind of Chestnuts, an.</i>	<i>℥ vj.</i>

Calcine the Oxe-bone in an ordinary fire, burn the Alum over a gentle fire till it be perfectly dry; then beat them together in a great Brass-Mortar, with the rest of the Ingredients, except the Mastich, which must be beaten apart; and having sifted the Powders thus prepar'd, mix them with the oyntment, stirring it till it be perfectly cold.

You shall meet with, in certain Authors, certain Descriptions of this Stiptic Oyntment, as also of an Oyntment call'd the *Countesses Oyntment*, very much esteem'd in practice. But if you examine all the Receipts, you shall find several mistakes that deserve to be reform'd, and acknowledge that it was not done amiss, to produce a better, and more Methodical. The Astringion which the Ancients would give to the oyl, by washing it with Alum-water, cannot be very great, since the principal Astringion of the Alum lies in its terrestreity, which never ascends in Distillation; and that the water drawn by that means alone, or in Distillation, is nothing but a slegm, which contains very little Spirit, and has no Astringion, neither in appearance, nor real. You shall also find, that the Astringion of Alum cannot be imparted to the oyntment, but by the terrestrial

terrestrial part; and that the choice, quantity, and use which is here made of the Alum, as of all the other Ingredients, are undeniably more regular, then any thing that is to be met with in the Dispensatories, in reference to this oyntment.

The terrestrial and astringent part of the Oxe's Thigh-bone being only necessary for this oyntment, the dissipation of the slegm, spirit, salt, and volatile oyls is not regarded, no more then the consumption of the watry and spiritous parts of the Alum, since there is no need of the terrestrial.

They who have this oyntment well prepar'd, need take no care for the Countesses oyntment, the preparation whereof is troublesome, and the vertues much inferiour.

The Styptic oyntment apply'd to the Reins, strengthens them, as also the Ligaments of the Matrix, the descent whereof it hinders, and prevents abortion, anointing the entrance thereof, and the lower part of the Belly. It is also successfully us'd to close the Neck of the Matrix after lying in, and to consolidate such tearings of the parts as happen sometimes after difficult Labour. It is also very proper against the Relaxation of the streight Gut, apply'd without, and put into the Fundament, and to stop unreasonable losses of blood in Women, apply'd to the Region of the Reins, the Liver, and all the Belly: It is also laid upon the Stomach to stay vomiting. This oyntment causes no heat at all, and may serve in word upon all occasions where there is need of closing and consolidation.

Unguentum Pomatum Officinale.

R. Radicum Ireos Florentia,	ʒ iij.
Santalī Citrini, &	
Benjonii, an.	ʒ j.
Resina Styracis,	ʒ iij.
Ligni-Rhodii, &	
Florum Lavendula, an.	ʒ j.
Acori Veri, &	
Caryophyllorum, an.	ʒ β.

A Pomatum-Oyntment for the Shops.

R. Roots of Florence-Orrice,	ʒ iij.
Yellow Sanders, and	
Benjamin, an.	ʒ j.
Rosin of Storax,	ʒ iij.
Lignum-Rhodium, and	
Flowers of Lavender, an.	ʒ j.
True Acorus, and	
Cloves, an.	ʒ β.

Beat them all in a great Brass-Mortar, sift them through a coarse Hair-sieve, and put them into a fine little Linnen-bag, yet big enough for the Ingredients to lye loose in it.

R. Axungia Porci maris purgata & lata,	lb iij.
Savi Hoedini recentis,	lb j.
Poma recentia cortice, & parte interiore	
liberata & in partes secta,	Nº xij.
Aqua Rosarum,	lb β.
Florum Aurantiorum,	ʒ iij.

R. Barrow's-grease cleans'd and wash'd,	lb iij.
New Kids Tallow,	lb j.
New Pippins par'd, cor'd, and cut into	
pieces,	Nº xij.
Rose-water, and	lb β.
Orange-flower-water,	ʒ iij.

Put all these together, with the Sack of Aromatics, into a narrow-mouth'd glazed Earthen-vessel close cover'd; set the Pot in a boiling Bath, till the moisture be almost all consum'd: Then strain and press the whole with a moderate strength; let the Pomatum cool, and having separated it from the Feces, keep it in a Galley-pot close stop'd in a cool place.

The Ingredients of this Pomatum are so proportion'd, that the odour may be pleasant, the colour white, and the consistence proper. And though the most part of Apothecaries have some particular Receipts, I believe there are not many who will reject this.

This Pomatum is chiefly us'd for such Deformities as happen to the Nose, and for chaps of the Lips, Breasts, Feet, Hands, and other parts of the Body. It serves also to soften and moisten the over-driens of the Skin.

You may also make a red Pomatum for the Lips, according to the following Receipt.

Melt in a Silver, or white Earthen-pot, in a hot Mary's Bath, an ounce of white Wax beais'd, as much Oxe-Marrow, and three ounces of the first Pomatum; and having added a dram of the tind of the root of Alkanet, sprinkl'd before with a little good

good Spirit of Wine, keep the Vessel in the same Bath, stirring the Pomatum from time to time, till it look very red; then strain it through a fine Linnen Cloth, and put up the Pomatum. You may also prepare a Pomatum of Oyl of Eggs in the same manner.

Melt in *Balneo Maria*, in a white Earthen-vessel, an ounce of white Wax, as much Sperma-Cete, with four ounces of Oyl of Eggs very pure, chusing the beginning of *May* for this Operation; and having cover'd the Vessel with a white Linnen cloth somewhat close spun, expose it to the open Air for several Months, and till the Pomatum be perfectly white. This Pomatum is very proper to preserve the beauty of the Complexion, to take away scars of the Face, and fill up the holes of the Small-pox, especially if you wash your face with Frog-spawn water, with never so little Borax dissolv'd in it, and if you wash the part once a day with Spirit of Wine. It is also very effectual to cure chops in the Lips, Breasts, and Fundament, especially if you add to it a little distill'd Oyl of Wax.

Unguentum Martiatum.

℞. *Radicum Althea, &*
Enula Campana,
Seminis Fenugreci, &
Cumini, an. $\frac{3}{4}$ iij.
Nardi Indica, $\frac{3}{4}$ ij.
Foliorum Rosimarini,
Lauri,
Ruta,
Marjorana,
Ebuli,
Sabina,
Mentha hortensis, &
Aquatica,
Mentastri,
Basilici,
Salvia,
Primula veris,
Polii Montani,
Calamintha,
Artemisia,
Absinthii majoris,
Origani,
Betonice,
Branca Ursina,
Herba venti,
Costi Hortensis,
Sambuci,
Millefolii,
Chamadryas,
Hyperici,
Centaureis minoris,
Tetrabit,
Cardui Benedicti,
Abrotani Maris &
Femina,
Caprifolii,
Tua Moschata,
Florum Stachados Arabice,
Chamamili,
Bupthalmi, an. M. j.

The Martiate Ointment.

℞. Roots of Althea, and
 Elecampane,
 Seeds of Fennegreek, and
 Cumin, an. $\frac{3}{4}$ iij.
 Indian-Nard, $\frac{3}{4}$ ij.
 Leaves of Rosemary,
 Laurel,
 Rue,
 Marjoram,
 Danewort,
 Savine,
 Garden-mints, and
 Water-mint,
 Wild-mint,
 Basil,
 Sage,
 Primroses,
 Mountain-Poley,
 Calamint,
 Mugwort,
 Greater Wormwood,
 Organy,
 Betony,
 Brank Urfine,
 Black French Horehound,
 Cost-Mary,
 Elder,
 Mill-foil,
 Germander,
 S. John's Wort,
 Lesser Centaury,
 Jews Iron-wort,
 Blessed Thistle,
 Southernwood Male and
 Female,
 Woodbine,
 Sea-Ground-pine,
 Flowers of Arabian Cassidony,
 Camomile,
 Oxe-eye, an. M. j.

Bruise them all, and put them into a narrow-mouth'd glaz'd Earthen-Vessel, and having pour'd upon them sixteen pints of Common Oyl, stop the Vessel close, and set it to macerate upon the hot Cinders for 24 hours. Then increase the fire, and boil the
 Ingredients

Ingredients, gently stirring them from time to time with a wooden Spatula, till the moisture be almost all consum'd; afterward strain and press the whole strongly out, and having separated the Oyl from the Feces

R. Cera flava,	℥ v.	R. Yellow Wax,	℥ v.
Butyri Mayalis,		May-Butter,	
Aleuris Ursi, &		Bears-grease, and	
Gallina,		Hens-grease,	
Medula Cervina, &		Deers Marrow, and	
Terebinthina Veneta, an.	℥ viij.	Venice-Turpentine, an.	℥ viij.

Melt the Wax first in little pieces, then add the Butter, the Greases, the Marrow, and Turpentine; and when the Oyntment is half cold,

R. Styracis Liquida,	℥ iiij.	R. Liquid Storax,	℥ iiij.
Myrrha,		Myrrh,	
Olibani, &		Olybanum, and	
Mastiches pulveratorum, an.	℥ ij.	Mastic in Powder, an.	℥ ij.

Mix them with the rest, and stir the Oyntment till it be cold.

The Receipt of this Oyntment in the Dispensatories is much alike. But if you examine them well, you will find that with great reason several Simples either of a cold or temperate quality are omitted, that rather hinder the good effects of the hot, then communicate any virtue to the Oyntment; and that those which are introduc'd in their stead, deserve to take their place.

Unguentum Martiatum is highly commended, and successfully us'd in all cold diseases of the Head, the Stomach, the Liver, and all the other Bowels, and of all the parts of the Body, particularly against Convulsions, and Relaxations of the Nerves, the Sciatica, and all sorts of Gouts, and Rheumatismes that proceed from cold causes: It softens and dissolves hardnesses, especially of the Liver and Spleen, the Nerves and Joynts, and appeases their pains. It is highly commended in Dropsies and Tympanies, the Belly being anointed therewith: It is made use of sometimes alone, sometimes mix'd with Spirit of Wine, Oyls, and other Oyntments; and also with Treacle, to anoint such parts of the Body as have need thereof.

Unguentum de Althæa.

R. Radicum Althææ recentium & minutim incisarum,	℥ vj.
Seminum integrorum Lini, &	
Fenugreci,	
Laminarum scilla minutim incisarum, an.	℥ iiij.
Aqua Fontana,	℥ viij.

Oyntment of Marsh-Mallows.

R. Roots of Marsh-Mallows fresh, and cut small,	℥ vj.
Whole seeds of Line, and	
Fenugreek,	
Slices of Squills cut very small, an.	℥ iiij.
Fountain-water,	℥ viij.

Put them together into a Copper-tinn'd-vessel, and pour upon them eight pints of common water; let them macerate over a very soft fire for 24 hours, stirring them from time to time with a wood'n Spatula; then let them boil gently, stirring them often, till the Muscilages are sufficiently thick; and having strain'd and press'd them through a strong close woven Cloth, mix with the press'd Muscilage eight pints of common oyl; then boil them again over a gentle fire, till the superfluous moisture of the Muscilages be consum'd: and having strain'd them again,

R. Cera flava,	℥ j.	R. Yellow Wax,	℥ j.
Colophonia, &		Colophony, and	
Resina, an.	℥ ss.	Rosin, an.	℥ ss.

Cut them in little pieces, and melt them, and if you observe any Feces at the bottom of the Vessel, strain them again, or at least separate by Inclination the clear from the impure, while the substances are very hot; then stir the Oyntment, and when it grows thick,

R. Terebinthina

Rx. *Terebinthina Veneta*,
Galbani puri,
Gummi Hedera pulverata, an.

℥ ij.

Rx. Venice-Turpentine,
 Pure Galbanum,
 Gum of Ivy powder'd, an.

℥ ij.

Incorporate them together, and mix them with the rest, stirring the oyntment till it be quite cold.

The preparation of the Muscilages necessary for this oyntment, has been a stumbling-block to many Authors, the most part of which have prescrib'd excessive quantities of Simples, from whence to extract the Muscilages, pretending to extract them with a very small quantity of water. Some fearing to mistake, have altogether omitted the quantities, as well of the roots, as of the water, prescribing only a certain quantity of Muscilages. Others ignorant of these kinds of preparations, direct the same Simples to be well bruis'd, believing erroneously, that there is no other way to extract Muscilages. But laying aside these different preparations, I believe an Artist may find here sufficient satisfaction, as well for the quantities of the Simples necessary for the Muscilages, as for the quantity of the water, and the method of preparation.

Oyntment of Marsh-Mallows, moistens, softens, and gently heats: It is proper to expel wind, and cause a transpiration of the serosities that fall between the Muscles of the Breast. It allwages pain in the sides, softens the hardness of the Bowels and Nerves, and the Tumours that happen to the parts of the body, particularly the *Parotides*, or swellings under the Ears, and about the Neck; it is us'd alone, and sometimes mix'd with other Oyntments, Oyls and Cataplasms.

Unguentum Basilicum.

Rx. *Cera flava*,
Servi Arietini,
Resina,
Piceis Navalis, &
Terebinthina Veneta, an.
Olei communis,

℔ j.
 ℔ v.

Basilicon Oyntment.

Rx. Yellow Wax,
 Rams Tallow,
 Rosin,
 Ship-Pitch, and
 Venice-Turpentine, an.
 Common Oyl,

℔ j.
 ℔ v.

Cut the yellow Wax, the Tallow, the Rosin, and black Pitch into little pieces, and melt them together in the Oyl, in a Copper Bason, over a gentle fire; then strain them through a coarse piece of Linnen, and incorporate the Turpentine with the straining, and the Oyntment is made.

Some Authors have prescrib'd not above half the quantity of the Oyl, not considering that so small a quantity cannot suffice to give a total consistency to the Oyntment, whereby it would prove so solid, as not easily to be got out of the Pot. Others leave it to the judgment of the Artist to proportion the quantity; but it was better to regulate the proportion for young beginners for the preparation of an oyntment, as much or more in use then any other.

The Name of *Basilicon*, or *Royal*, is given to this oyntment, as well for the virtues, as the frequent use. It is also call'd *Suppurative*, because it digests and hastens Suppuration. It operates very gently, and allwages the pains that are felt while the matter is ripening; it cicatrizes also wounds when the matter is come forth. It is spread alone upon Linnen-folds, and sometimes mix'd with yolks of Eggs, Turpentine, or other Oyntments, Oyls and Emplasters.

Unguentum Egyptiacum.

Rx. *Aeruginis Aeris*,
Aceti Acerrimi,
Mellis Optimi,

℥ x.
 ℥ xiiij.
 ℥ xxviij.

The Egyptian Oyntment.

Rx. Rust of Brass,
 Strong Vinegar,
 The best Honey,

℥ x.
 ℥ xiiij.
 ℥ xxviij.

Bruise the Rust of Brass, dissolve it in the Vinegar, pass it through a Hair-sieve, and boil them both together with the Honey to the consistence of a soft oyntment.

The inconveniences which I suffer'd formerly, when, according to the method of the Ancients and Moderns, I was wont to beat the Verdigrease dry'd, the small dust

H h

whereof

whereof getting into my Eyes and Nostrils, caus'd a most insupportable Corrosion. These inconveniences, I say, caus'd me to seek out some way to avoid them: Thereupon, finding it so easie to incorporate Verdigrease with Vinegar and Honey, I thought I might as well dissolve the Verdigrease in Vinegar, or at least steep it in such manner, that it might pass through the Hair-sieve with the Vinegar, and leave upon the Sieve the little pieces of Copper and Feces of the Grapes that us'd to be mix'd with it: which succeeded so well, that ever since I have practis'd that way which I was desirous to impart to publick view.

For the preparation therefore of this oyntment, take eleven ounces of Verdigrease instead of the ten ounces here prescrib'd, to supply the waste of the little pieces of Copper, or the Feces of the Grapes which are usually mix'd with it. Put them into a Copper Frying-pan, and hold them over a gentle fire, and having very well bruise'd them with a wood'n-pestle, and steep'd them in the Vinegar prescrib'd, pass the whole through a Hair-sieve; and if any of the Verdigrease remain in the Sieve, return it into the Pan, bruise it, and steep it in some portion of the same Vinegar, and pass it again through the Sieve, till only some useless pieces of the Copper and Lees of the Grapes remain behind. Then boil the dissolution with the Honey prescrib'd over a gentle fire, stirring it from time to time till it come to the consistence of a soft oyntment, and look of a red colour.

Some say, that an Egyptian Physician invented this oyntment, and gave it the name; others, that it was call'd *Egyptiacum*, because of its colour. However it were, the principal use of it is to consume rotten flesh, and superfluities of Ulcers that hinder the growing of the live flesh: It operates vigorously, and with some pain: For which reason the oyntment of the Apostles is made use of in its place, when there is no reason for any such violent effects. Usually it is enough to anoint the Tents and Linnen Rolls with this oyntment.

Unguentum Apostolorum.

Rx. Cera Citrina,	℥ iiii.
Resina,	
Terebinthina, &	
Ammoniack, an.	℥ xiiij.
Lithargyri Auri,	℥ ix.
Olibani,	
Aristolochia rotunda,	
Bdellii, an.	℥ vj.
Myrrha,	
Galbani, an.	℥ 6.
Opoponaxis,	
Viridis Aeris, an.	℥ ij.
Oleicommunis,	℔ ij.

The Apostles Oyntment.

Rx. Yellow Wax,	℥ liij.
Rosin,	
Turpentine, and	
Ammoniack, an.	℥ xiiij.
Litharge of Gold,	℥ ix.
Olibanum,	
Round Birthwort,	
Bdellium, an.	℥ vj.
Myrrh,	
Galbanum, an.	℥ 6.
Opoponax,	
Verdigrease, an.	℥ ij.
Common Oyl,	℔ ij.

Beat the Birthwort-root, as also the Litharge, Myrrh, Bdellium, and Verdigrease in a large Brass-Mortar; melt the Opoponax, Galbanum, and Gum-Ammoniack in a Brass-Mortar heated, and incorporate the Turpentine with them when they are melted. In the mean while, cause the Rosin and Wax to be cut into small pieces, and melted with the Oyl: Then take out the mixture of the Gums and Turpentine out of the Mortar while it is hot, and put it into a Copper Frying-Pan; and holding the Pan over a gentle fire, incorporate the Wax and the Rosin, stirring the whole with a wood'n-Pestle till the Ingredients are well united: Then take the Pan from the fire, stirring continually till the oyntment begin to thicken; then mix first the Verdigrease to give the oyntment its green colour, afterwards add the other Powders mix'd together before; and when all the ingredients are well incorporated, and cold, put up the oyntment for use. I think there cannot be a better method for this preparation, as well to preserve the vertue of the Ingredients, as for their well mixing. But if any other Artist have found a better way, he may do well to communicate it as frankly as I have done this.

It is call'd *Unguentum Apostolorum*, rather from the number of the Medicaments, then for any use that the Apostles made of it. The Ancient, and most part of the Modern Receipts of this oyntment, prescribe no more Wax then Rosin and Turpentine: Many Authors also direct the boiling of the Litharge with some part of the Oyl, and almost all prescribe the boiling and dissolving the Gums with the Vinegar. True it is, that the

the oyntment may be prepar'd without augmenting the weight of the Wax, whether you boil the Litharge in some part of the oyl or no, or whether you mix the Gums after you have boil'd and dissolv'd in the Vinegar; but I think it better to proceed otherwise: For the augmentation of the Wax is not to be disapprov'd, considering that if you follow the usual proportion of oyntments, two pints of oyl require six ounces of wax: and it were well prescrib'd, but that some consideration must be also had to the Rosin, Gums, and Litharge, and other Powders that give some substance to the oyntment: Nor is there any fear that the augmentation of the wax should, whose vertues are so well known, diminish the vertues of the oyntment.

The Apostles Oyntment is very much us'd to cleanse Wounds and Ulcers, for it consumes putrefaction and superfluities, and causing the sores to look well, afterwards dries and cicatrizes them.

Unguentum Aureum.

The Golden Oyntment.

R. Olei communis,	℥ ii ℥.	R. Common Oyl,	℥ ii ℥.
Cera Citrina,	℥ ℥.	Yellow Wax,	℥ ℥.
Terabinthina Veneta,	℥ ij.	Venice-Turpentine,	℥ ij.
Resina,		Rosine,	
Colophonia, an.	℥ i ℥.	Colophony, an.	℥ i ℥.
Oliban,		Olibanum,	
Mastiches, an.	℥ j.	Mastich, an.	℥ j.
Croci,	℥ j.	Croci,	℥ j.

Pulverize apart the Olibanum, Mastich, and Saffron; and having melted over a gentle fire the Wax, Rosin, and Colophony in the Oyl prescrib'd, take the Vessel from the fire, and mix the Turpentine, stirring the oyntment gently till it begin to grow thick; at which time mix the Powders, continually stirring the oyntment till all the Ingredients are well united.

This Oyntment is thus call'd from its Golden colour, especially if the Rosin, Wax, and Colophony be of a good colour, and pure; and if the Saffron be new.

The use of it is chiefly to incarnate and cicatrize Wounds and Ulcers.

Unguentum Mundificativum de Apio.

A Cleansing Oyntment of Parsley.

R. Foliorum Apii,	M iij.	R. Leaves of Parsley,	M iij.
Hedera terrestris,		Ground-Ivy,	
Abinthii majoris,		Bigger Wormwood,	
Centaurei minoris,		Lesser Centaury,	
Chamadryas,		Germander,	
Salvia,		Sage,	
Hyperici,		S. John's Wort,	
Plantaginis,		Plantaine,	
Millefolii,		Millfoil,	
Vincæ peruviana,		Perwinkle,	
Consolida majoris, &		Bigger Comfoud, and	
Medicæ,		Midling-Comfoud,	
Betonica,		Betony,	
Caprifolii,		Woodbine,	
Verbena,		Vervain,	
Veronica,		Speedwell,	
Galei lutei,		Yellow Ladies Bed-straw,	
Centinodia,		Centinody,	
Ophryglossi,		Adders-tongue,	
Pimpinella,	M ij.	Pimpernel,	M ij.
Olei communis,	℥ viij.	Common Oyl,	℥ viij.
Piceis Alba,		Black Pitch,	
Savi Arietini,		Rams Suet,	
Cera Citrina, &		Yellow Wax, and	
Terabinthina, an.	℥ ij.	Turpentine, an.	℥ ij.
			Gather

Gather the Herbs, if it may be done, all the same day, when they are in their full vertue, and bruise them in a Marble Mortar. Melt the Wax, Pitch, and Suet in a Copper-pan tinn'd within, over a gentle fire, in the Oyl; put in the bruis'd Herbs, and boil them together gently, stirring the ingredients from time to time with a wooden Spatula; and when the moisture is almost all consum'd, strain and strongly press out the whole; when the straining is cold, and separated from the Feces and moisture,

*Rx. Pulveris Myrrhae Electæ, &
Aloes Succotrine, an.
Aristolochia Rotunda, &
Radix Iree Florentinæ, an.*

℥iij.

℥ij.

*Rx. Powder of Select Myrrh, and
Aloes Succotrine, an.
Round Birth-wort, and
Root of Florence-Orrice, an.*

℥iij.

℥ij.

Incorporate all these finely powder'd with the whole, and the Oyntment is made.

There are several Modern Receipts of this Oyntment, but various, both in respect of the ingredients, and manner of preparation. But if you examine this, I believe you will find it rightly prescrib'd in all respects, and as rightly and methodically prepar'd.

Some for the preparation of a cleansing Oyntment, content themselves to extract the juice of some of these Plants, and to boil it among the Oyl, and other Medicaments which are apt to melt. But besides that the juices alone are not able to impart their vertue to the Medicine, unless assist'd by those other parts of the Herbs from whence they are drawn, we know by experience that they cannot communicate neither to this nor any other oyntment their green colour, unless the Herbs be boil'd whole.

This Oyntment is proper to cleanse all sorts of Ulcers and Wounds, dissipate excrementitious serosities, and to prevent them from breeding. It is also esteem'd against the biting of Mad-dogs.

Unguentum Mundificativum de Resina.

*Rx. Olei communis,
Resina,
Terebinthina, &
Mellis communis, an.
Cera flava,
Myrrha Electæ,
Sarcocolla,
Farina Lini, &
Fenugraci,
Thuris, &
Masticæ, an.*

℥ij.

℥ss.

℥iij.

℥j.

A Cleansing Oyntment of Resine.

*Rx. Common Oyl,
Rosine,
Turpentine, and
Common Honey, an.
Yellow Wax,
Select Myrrh,
Sarcocoll,
Flower of Linseed, and
Fengreek,
Frankincense, and
Mastic, an.*

℥j.

℥ss.

℥iij.

℥j.

Cut the Wax into small bits, and melt it in the oyl prescrib'd over a gentle fire, and having separated the filth, and stirr'd the oyntment till it be half cold, add the Honey and Turpentine first, then the Flower of Linseed and Fengreek, and lastly the Gums finely powder'd, and incorporate all well together.

This Oyntment was invented, by reason of the difficulty to get the Herbs that compound the Mundificative of Parsley, at all times.

This oyntment is as it were a Deputy in the place of the Parsley-oyntment, and is almost as much in use, and not much inferior in vertue.

Unguentum Agrippæ.

*Rx. Radicum Brionia,
Cucumeris Asinini,
Scilla,
Ireos,
Filicis,
Ebuli, &
Tribulorum aquaticorum, an.*

℥ij.

℥j.

℥j.

℥iij.

℥ij.

Agrippæ's Oyntment.

*Rx. Roots of Briony,
Wild Cucumber,
Squills,
Orrice,
Fern,
Danewort, and
Water-Caltrops, an.*

℥ij.

℥j.

℥j.

℥iij.

℥ij.

Having

Having cleans'd, wash'd, and bruis'd the Herbs in a Marble-Mortar, put them into a narrow-mouth'd glaz'd Earthen-pot, and pour the prescrib'd oyl upon them; then cover the Pot, and keep it four and twenty hours upon hot Embers; after that, boil the ingredients gently, stirring them from time to time with a wood'n Spatula, and covering the Pot still when you have done, till the moisture of the Roots be almost consum'd; then having strain'd and press'd the whole strongly forth, and having purify'd the oyl, mix with it

Cera Citrina,

℥ xviii. | Yellow Wax,

℥ xviii.

Then take the Vessel from the fire, and stir the ointment till it be almost quite cold.

The impossibility that four pints of oyl should retain the vertue of all the Roots here prescrib'd, according to the Ancients, has caus'd an alteration of six pints of oyl, and the weight of the Wax to be augmented.

I have not insert'd this ointment here, though said to be made by King *Agrippa*, who liv'd in the time of *S. Paul*, for the frequent use that is made of it, but for its vertues that recommend it for the cure of the Dropie, by anointing the Belly with it; and the Splenetic, by anointing the part where the pain lies. It is also good to dissolve hard and knotty swellings that happen to the Nerves, and to appease the pains in the Kidneys. It also loosens the Belly of Children, and tender Persons, apply'd to the Region of the Stomach and Navel.

Unguentum Neapolitanum.

The Neapolitan Ointment.

R. *Axungia Suilla*,
Argenti vivi,
Terebinthina Veneta,
Axungia Viperina,
Olei Laurini, &
De Spica,
Cera Flava, &
Syracis Liquida, an.

℔ ij.

℔ j.

℥ iiii.

℥ iiii.

R. Sows-grease,
Quick-silver,
Venice-Turpentine,
Vipers fat,
Oyls of Laurel, and
Spike,
Yellow Wax,
Liquid Storax, an.

℔ ij.

℔ j.

℥ iiii.

℥ iiii.

Pass the Quick-silver through a piece of Shamoy's-leather, and incorporate it with the Turpentine, stirring both together in a large Brass-Mortar for a good while; and when the Turpentine has well devour'd the Quick-silver, add the Liquid Storax, and by degrees the Sows-grease, with the Wax melted in it; then add the Vipers fat, and the Oyls of Laurel and Spike, and after you have stirr'd them a long time, and well incorporated the whole, put up the ointment for use.

There are several Receipts in several Dispensatories of this ointment, and under a great many names, with a large number of Ingredients; but we thought fit to take no more than those that are sufficient to produce the effects desir'd from this Ointment.

Some, the more exactly to mix the raw Mercury with this ointment, dissolve it in *Aqua fortis*, and afterwards evaporating it over a gentle fire, mix the Mercury thus dry'd with the remaining part, or else evaporate the *Aqua fortis* thus charg'd among the other Medicaments. But besides that you may very easily and effectually mix the Quick-silver with this ointment, if you will but take the pains to stir it well with the Turpentine, and afterwards with the Storax, and other Ingredients; it is very inconvenient to introduce the corrosive quality of the *Aqua fortis* into the ointment, the bad effects whereof tender Constitutions will be sure to feel.

As for the Dose of the Mercury, you may augment or diminish it according to the various purposes of the Physician, and the Constitutions of the persons for whom the ointment is prepar'd: So that when you are to anoint persons of a strong Complexion, who resist the penetration of the Mercury, you may augment the quantity to a third, or a half, and that of the Turpentine proportionably, the better to make the mixture: whereas for tender persons, four ounces, or a lesser quantity of Mercury is sufficient; or when you only design the ointment to kill Fleas, or cure the itch.

This ointment is very much us'd for the cure of the Pox, especially when the venom thereof is spread over the whole habit of the body. The principal vertue of it lies in the Mercury, which attenuates, dissolves, and dulcifies thick flegm, which is the Seat

of,

of the Venereal Venom, and brings it generally forth by Salivation. The usual custom is to anoint with this ointment the Arms, the Legs, the Thighs, the Buttocks, and the Spine of the Back; and because that Mercury is accounted a very great Enemy to the Nerves, the best way is to add to this ointment such Remedies as may in some measure counterbalance its bad effects; such are Oyls of Laurel, Spike, Vipers fat, Liquid Storax, and Turpentine, which fortifying the Nerves, serve also to assist the penetration of the Mercury: Not that all these Medicaments are sufficient to hinder altogether the bad effects of the Mercury, but we may certainly believe, that they do very much abate them. They may be also entirely carri'd off, or at least the greatest part of them dissipated after the Expulsion, by making use of powerful Diaphoretics; and among the rest, volatile salts of Animals, in the number of which is Salt-Ammoniac, of which I my self have seen the wonderful effects, upon a person very coarsly handl'd by the Mercury; which is to be attributed to the volatility and penetration of those Salts, which being dispers'd by the heat of the Stomach through the whole habit of the body, and divided at least into as many Particles as there may be of Mercury, seeking to get out through the pores of the skin, carry along with them such Particles of the Mercury as they meet with in the way, and drive them out mix'd and dissolv'd in the sweat which they have provok'd.

Ceratum Refrigerans.

A Cooling Cerate.

Rx. Olei Rosati,
Cera Alba,

℥j.
3 iij.

Rx. Oyl of Roses,
White Wax,

℥j.
3 iij.

Break the Wax, and put it with the Oyl into a glaz'd Earthen-pot, and set the Pot in a hot Mary's Bath, till it be well melted in the Oyl; then taking off the Vessel, stir the ointment without intermission with a wood'n-Pestle till it be cold, adding in the meantime two ounces of fair water, and continuing the same stirring: when the first water is suckt up, add more; continuing to add more water, and stir, till the ointment be white enough, and that you find it have water enough; then pour out all the water by inclination, and put up the Cerate for use. Some there are that mix an ounce of Vinegar distill'd to make it more piercing.

This Cerate is very frequent in Shops. It is good to be apply'd, by way of Unction, upon all parts that have need of cooling: For which reason it is very serviceable against heats of the Reins, Flegmons, Erysipela's, and Tetters. It is highly approv'd for appeasing the pain of the Emroids, to cure peelings of the Skin, to allay inflammations of the Thighs, and other parts of the bodies of little Children, and fat purse people, and to cure chaps, and other sores at the end of Womens Breasts. It serves also for the cure of Burns, alone or mix'd with other ointments, and to temper the heat of the Hypochondriums. It is also mix'd with ointment of Ceruse, when there is occasion to dry or close.

Ceratum Santalinum.

A Cerate of Sanders.

Rx. Olei Rosati,
Cera Alba,

℥j.
3 iij.

Rx. Oyl of Roses,
White Wax,

℥j.
3 iij.

Put them together into a glaz'd Earthen-pot, and melt the Wax in a hot Mary's Bath; take the Pot off the fire, and stir them with a wooden-Pestle till the ointment be half cold; then

Rx. Rosarum Rubrarum,
Santalii Rubri,
Albi, &
Citrini, an.
Boli Armena,
Spodii,
Camphora,

3 xij.
3 x.
3 vj.
3 vij.
3 lb.
3 ij.

Rx. Red Roses,
Red Sanders,
White, and
Yellow, an.
Bole-Armoniac,
Spodium,
Camphire,

3 xij.
3 x.
3 vj.
3 vij.
3 lb.
3 ij.

Bruiſe

Bruiſe the Sanders in a great Marble-Mortar, moiſtning them from time to time with Roſe-water, o give a red colour to the white and yellow Sanders, and increaſe their ſcent; and having paſſ'd them through a Silk-ſieve, heat the red Roſes dry'd in the ſame Mortar; then mix the Powders with the Spodium, and the Bole-Armoniac bray'd upon Porphyry, and the Camphire beaten with never ſo little Spirit of Wine; incorporate all together with the oyntment, and put it up for uſe.

It is good for the cure of Flegmons, to allay the hot intemperatures of the Stomach, Liver and Reins; to which purpoſe it is apply'd alone, or mix'd with equal parts of oyntment of Roſes: Sometimes the Forehead and Temples are anointed therewith, being mix'd with Popler-oyntment, and a little Opium ſomewhat liquid, as well to provoke ſleep, as eaſe the pains of the Head.

Ceratum Stomachicum.

A Cerate for the Stomach.

R. Olei Cydoniorum,	℥j β.	R. Oyl of Quinces,	℥j β.
Cera Alba,	℥vj.	White Wax,	℥vj.
Masticheſ Electæ, &		Choice Myrrh, and	
Rofarum rubrarum, an.	℥xx.	Red Roſes, an.	℥xx.
Foliorum Abſinthii Siccarum,	℥xv.	Dry'd leaves of Wormwood,	℥xv.
Nardi Indica,	℥x.	Indian-Nard,	℥x.

After you have melted the white Wax, with the Oyl of Quinces, in a glaz'd Earthen-pot over a gentle fire, and ſtirr'd it till it begins to thicken, incorporate with it all the other ingredients very finely powder'd.

You may melt the Maſtich in ſome part of the Oyl, and mix it afterwards with the diſſolution of the Wax, if the Maſtich be very clean. But becauſe it is generally foul, we are oblig'd to beat it a-part in a Braſs-Mortar, ſprinkling it with ſome drops of water, and to paſſ it through a Silk-ſieve; and then this Powder is eaſily mix'd with the reſt.

The Ancients preſcribe, after the melting the white Wax in Oyl of Roſes, to waſh the mixture ſeveral times in Roſe-water; and then having melted it again, to waſh it again with Juice of Quinces, and thick Wine. But becauſe theſe Lotions add very little Aſtringency to theſe ſorts of Remedies, it is much better to make uſe of the Oyl of Quinces wherein the Juice of Quinces has boil'd, and to let alone the Oyl of Roſes.

It is call'd the Stomach-Searcloth, becauſe it is chiefly us'd in diſtempers of the Stomach, which it ſtrengthens, helps digeſtion, gives an appetite, ſtays vomiting, expels wind, digeſts bad humours, and facilitates their expulſion; for which reaſon it is apply'd hot to the Stomach.

Ceratum Diaſulphur.

A Cerate of Sulphur.

R. Olei Nucum Juglandium expreſſi,	℥j.	R. Oyl of Wall-nuts preſs'd,	℥j.
Florum Sulphuris,	℥ij.	Flowers of Sulphur,	℥ij.
Salis Tartari,	℥j.	Salt of Tartar,	℥j.

Digeſt them all together in a Sand-bath moderately hot, till the Flowers of Sulphur are diſſolv'd in the Oyl: Pour out by inclination the clear liquor into a Braſs Frying-pan tinn'd within, and over a gentle fire melt therein

Cera Citrina,	℥iiij.	Yellow Wax,	℥iiij.
Colophonia,	℥iiij.	Colophony,	℥iiij.

Then taking the Pan from the fire, and ſtirring the Ingredients till they are half cold, incorporate

Myrrha Elect. ſubtiliter pulverat. ad pondus omnium, & factum erit Ceratum.

The full weight of all the Ingredients of Myrrh finely powder'd, and the Searcloth is made.

This

This Sear-cloth is very proper to soften and dissolve scrophulous Tumours, and all sorts of exterior gatherings together of cold Matters hard to dissolve. It is also a Specific to dissolve Tumours in the Testicles, caus'd by some Venereal Venom, and to cleanse all sorts of Ulcers. It is to be spread upon Linnen, or upon Leather, and apply'd to the parts affected; but when it is apply'd to the Testicles, make use of a Purse and Swathing-bands.

CHAP. VI.

Of Emplasters.

Emplasters are Compositions outwardly apply'd, but more solid than Oyntments, so as to be made into hard Rolls, or Langates, when they are boil'd, and cold; and are kept wrapt only up in Paper. Emplasters were invented to make a longer stay upon the parts than Oyls and Oyntments, and because they keep much longer, without any diminution of their vertue. Oyls, Fats, Wax, Pitch, dry Rosins, Turpentine and Gums, are the usual Ingredients of Emplasters, to which are sometimes added Litharge, Ceruse, Verdigrease, several Powders, and several Liquors.

There are no absolute Rules for the proportion of the Ingredients, but what are to be observ'd in the particular Receipts of several Plaisters, in the preparation of which you shall find what is to be practis'd, as well for the particular ordering of every Medicament, as for the boiling and mixture of the whole. Emplasters are us'd for the cure of Wounds and Ulcers, to allwage pain, strengthen, stay Defluxions, Vomiting, Emrods, for Suppuration, Dissipating, Dissolving; and for many other purposes too long to recite.

Emplastrum Album, sive de Cerusa. The white Plaister, or Plaister of Ceruse.

*R. Cerusa Veneta, ℥
Olei Rosati, an.
Aqua Fontana,
Cera Alba,*

*℔ iij.
℔ ij.
℥ viij.*

*R. Venetian-Ceruse, and
Oyl of Roses, an.
Fountain-water,
White Wax,*

*℔ iij.
℔ ij.
℥ viij.*

Take white, weighty, pure and brittle Ceruse, and rub it to powder over a Hair-sieve revers'd: Then put it into a large Copper-Vessel, broad at the top, and conic toward the bottom, and tinn'd within, and incorporate the oyl and water prescrib'd, cold as they are, with the Powder, stirring them with a strong wooden Spatula, about two foot long, and two fingers broad at one end; then set the Pan over a Charcoal-fire lighted in a proper Furnace, and boil the Ingredients, stirring them without intermission, till they begin to sink to the bottom of the Vessel, not so much by the diminution of the heat of the fire, as the consumption of the water that kept them so high: Then taking the Pan from the fire, try the consistence of the Syrup, (and if it be not sufficiently boil'd, set it on again, to evaporate by continual stirring that little moisture that may remain, and hinder the Plaister from thickning as it ought. When it is sufficiently boil'd, melt the Wax into it, still stirring it till it be almost cold: Then take out the whole mass, and upon a smooth Table moisten'd, make it up into little rolls, as thick and long as your finger, and cover them with Paper.

Though this Plaister may be made with no more than three pound of Ceruse, according to the old Dispensatories, and boiling it very gently, and without making use of any moisture; yet I am of opinion, that the augmenting the weight of the Ceruse, augments the vertue of the Plaister; and that the addition of the water preserves the whiteness of it, and facilitates the preparation. Minium is left out, in regard the Plaister is intended to be white, though you may make use of Litharge well prepar'd, and it will be almost as white as that made with Ceruse.

According to the directions above-giv'n, while the water serves as an Intermedium between the Oyl, the Ceruse, and the Fire, keeping the Ingredients rais'd, and as it were suspended, and prevents the ill impressions which otherwise they might receive, you may boil the Plaister in an hour, or an hour and a half, and have it as white and as good

good as can be desir'd; and not being subject to the long and troublesome Preparation of the Ancients, there is no fear of that ill success that usually attends it. Nor is there any need of washing the Ceruse, since the Water boyl'd with it, and preserving the good qualities of the Ceruse, during the Coction of the Emplaster, produces a better Effect than all the Lotions that can be expected.

Some add and boyl distill'd Vinegar in this Emplaster, pretending to open the Ceruse, and make it more fit to incorporate with the Oyl: But that care is to little purpose, since that Ceruse, and all Limes, or Calx's of Lead, easily incorporate with Oyl, by the means of boyling and stirring, without the help of the Vinegar.

As for the addition of Bay-salt, I think there is no reason for it; for that would but make the Plaister cause smarting and stinging, which is principally design'd to heal the deformities of the Skin, to dry up Peelings and superficial Exulcerations, to cicatrize Wounds and Ulcers, and allay Inflammations. It is also approv'd for the cure of Scalds and Burnings.

Emplastrum Palmeum.

R. Lithargyri Aurii preparati, &
Olei Communis, an. ℥ iiij.
Axungie Suille, &
Decocti tenniorum Ramorum Palmae vel
Quercus, an. ℥ ij.

The Diapalma Plaister.

R. Litharge of Gold, and
Common Oyle, an. ℥ iiij.
Sows Grease, and
Decoction of the tender Boughs of
Palms or Oak, an. ℥ ij.

Boyl the tops of the Branches of Palm or Oak, bruis'd or cut very small, over a gentle fire, in three pints of Water, to the consumption of the half; and having press'd out the whole, reserve the strain'd Decoction. Chuse the Litharge of Gold of a deep colour, greasie to handle, and having bruis'd it in a large Brass Mortar, and steep'd it in two or three pints of Water, pour out the thick Water hastily into another Vessel, which Water will be charg'd with the most subtile part of the Litharge, while the grosser descends to the bottom of the Water: then beat the Litharge in the Mortar again, steep it in the first Lotion, or in fresh Water, and having pour'd out the troubl'd Water, by Inclination, into the fine Litharge at the bottom of the Vessel; do this again, till there remain at the bottom of the Mortar nothing but onely the impure Litharge, that will not be beaten smaller: Then let the Lotions settle, and pour out the Water by Inclination, and dry the Pouder. Take the quantity of this Powder prescrib'd, and mix it cold in such a Copper pot as is describ'd for the Ceruse Plaister, stirring it with the Oyle, Grease, and Decoction of Palm-branches; and when they are well incorporated together, boyl them over a good fire, in a proper Furnace, stirring them continually with a wood'n Spatula, and keeping an equal heat during the Coction;

Sub finem, addendo,

Chalcitidis nativæ, vel Vitrioli ad rubedinem calcinati, & in portione Decocti diluti, ℥ iv.

Toward the end whereof, add,

Of Natural Chalcitis, or Vitriol calcin'd to redness, and steep'd in some part of the Decoction, ℥ iv.

Then boyl them all together to the consistence of an Emplaster.

If you desire the Plaister should look white, add double the weight of white Vitriol.

This Method of Boyling the Tops of the Palm-branches, and consuming the Decoction with the Plaister, is superiour to any other; for while it imparts thereby the Vertue of those Ingredients to the Emplaster, it hinders the bad Impressions of the fire, and boyls the Emplaster in less time.

There is no Plaister more in use then that of *Diapalma*: It is made use of for the cure of Wounds, Ulcers, Tumours, Burns, Contusions, Fractures, Childblains, and to lay upon Cauterics, as well in Plaister, as in Saradrap, and is almost a Universal Remedy for all sorts of external Sores. Sometimes it is reduc'd to the consistence of a Ceruse, by mixing with it a third or fourth part of its weight in Honey, by the name of *Diapalma dissolv'd*, or *Cerate of Diapalma*.

Emplastrum Diachylon Simplex.

Simple Diachylon Plaster.

R. *Radicum Althea mundatarum, & minutim incisarum,* 3 vj.
Seminum integrorum Lini, & Fennegreci, an. ʒ iv.
Aqua Fontana, lb vj.

R. Roots of Marsh-mallows, cleans'd and cut small, 3 vj.
 Whole Seeds of Line, and Fennegreek, an. ʒ iv.
 Fountain Water, lb vj.

Macerate them twenty four hours over a very soft fire, stirring them from time to time; then boyl then over a gentle fire, to the consistence of a thick Muscilage: which done, strain and press them out strongly. Then

R. *Olei Communis,*
Lithargyri Auri,

lb iv.
 lb ij.

R. Common Oyle,
 Litharge of Gold,

lb iv.
 lb ij.

Mix the Oyl with the Litharge cold, in a Vessel like the former; and having added and well incorporated the Muscilages, stir the whole without intermission, and as swiftly as may be, as well to keep the Litharge from falling to the bottom, as to procure the Plaster its due whiteness. Continue boyling and stirring till the Mass begins to sink, which is a sign that the greatest part of the Muscilages is consum'd; then slack'n the fire to half the heat, and onely to evaporate the superfluous moisture, which being consum'd, the Plaster is sufficiently boyl'd to the whiteness and consistence it ought to have.

Some would have the Muscilages added by degrees, and at the end of the Coction: But beside that it is a more tedious way, 'tis most certain, that the Muscilages will bind the Litharge with the Oyle much better, and keep it from burning, not burning themselves, which they would do, if onely put in at the end; and by their assistance the Plaster becomes much more white, and of a better consistence.

It is call'd *Diachylon*, from the mixture of the Juyces of the Roots of *Althea*, and Seeds of Line and Fennegreek. It is call'd White, from its colour.

I need not give you the Receipt of *Emplastrum Diachylon Ireatum*, which may be made at any time, by mixing an ounce of fine Powder of *Florence Orrice*, with a pound of *Diachylon*; which is highly recommended to soften and dissolve Hardnesses and Schyrrous Tumours of the Liver, Spleen, and all the Bowels; to discuss scrofulous or Kings-Evil Humours, and the old remainders of Apostemes. It allays the heat of Wounds, conglutinates those which are not very deep, cures the Inflammations of the Neck of the Matrix, being put up like a Pessarie, eases the Gouttie; and, in a word, is proper wherever there is occasion to mollifie and cool.

Emplastrum Diachylon compositum Gummatum.

Compound Diachylon Gum'm'd.

R. *Radicum Althea, mundatarum & minutim incisarum,* ʒ iv.
Ficuum, & Passularum pinguium mundatarum & pariter incisarum, & Seminum integrorum Lini, & Fennegreci, an. ʒ ij. ʒ.
Aqua Fontana, lb vj.

R. Roots of Marsh-mallows, cleans'd and cut small, ʒ iv.
 Figs, and Fat Raisins cleans'd and cut small, and Whole Seeds of Line, and Fennegreek, an. ʒ ij. ʒ.
 Fountain Water, lb vj.

Put them all together into a glaz'd Earthen pot, and set the pot over a very soft fire for twenty four hours, stirring the Matters from time to time with a wood'n Spatula: then augmenting the fire, boyl the whole gently, still stirring them, till the Muscilages are become very thick; strain and press them, and reserve the Muscilages.

Eodemq; tempore,

And at the same time,

R. *Succorum Scilla, & Ireos Nostratis, an.*

ʒ iv.

R. Juyces of Squills, and French Orrice, an.

ʒ iv.
 Wrap

Wrap a large Squill in Wheaten paste, and put it into a Bakers Oven among the Bread; throw away the paste and the dry skins, and beat the moist slices in a Marble Mortar, with a wooden pestle: then strain and press out the juyce through a small Linen bag. Rasp or bruise the Orrice, newly gather'd, in a Mortar, and squeeze out the juyce through a Linen bag.

Tunc in Muscilaginem redige,

Then reduce into a Muscilage

Ichthyocolla minutum incise,

℥ j.

Of Mouth-Glew or Water-Glew, cut small,

℥ j.

Put it into a glaz'd Earthen pot, and pour upon it four ounces of the foregoing Juyces: keep the pot over a very soft fire, stirring the Ingredients with a wooden Spatula, till the whole be reduc'd into a just Muscilage, and keep it apart.

Tunc,

Then,

Rx. *Lithargyri Anvi preparati,*

℔ ij.

Rx. Litharge of Gold prepared,

℔ ij.

Oleum Chamomilla,

Oyls of Camomil,

Ireos Nostratis, &

French Orrice, and

Anethi, an.

℥ xvj.

Anise, an.

℥ xvj.

Put the Litharge in a proper Copper pot, and incorporate it, from the fire, with the Oyls and the first Muscilages, stirring them continually with a wooden Spatula, and boyl them together, as I directed in the white Diachylon: When they are almost boyl'd, slacken the fire, and add the Muscilages of the Water-glew, incorporated with the *Oesipus*, stirring them continually, till the moisture of the Muscilages be almost consum'd, and that the Composition be sufficiently thick:

Tunc,

Then,

Rx. *Terebinthina Veneta,*

℥ vj.

Rx. Venice Turpentine,

℥ vj.

Resina Pini,

Pine Rosine,

Cera Flava, &

Yellow Wax, and

Oesipi humidi, an.

℥ iv.

Moist Grease of Wooll, an.

℥ iv.

Galbani,

Galbanum,

Sagapeni, &

Sagapen, and

Bdellii in Vino dilutorum, trajectorum & ad Mellis densitatem coctorum, an. ℥ ij.

Bdellium dissolv'd in Wine; pass'd through a strong Cloth Sieve, & boyl'd to the thickness of Honey, an. ℥ ij.

Mix the *Oesipus* with the Water-glew as before. Melt the Wax and Rosin in the hot Consistence: Incorporate the Gums with the Turpentine, and having mixed the whole, set it over a gentle fire, till the superfluous moisture of the Gums be consum'd; then take the Pan from the fire, let the Plaister cool, and make it up into Rolls, to be covered with Paper.

The most part of the Receipts of this Emplaster in the Dispensatories, not containing above the half of the Receipt of this, order an ounce and half for the Dose of every sort of Muscilage, not having determin'd the quantity of every part of the Simples out of which they are to be extracted; nor having consider'd, that so small a quantity of Muscilage cannot communicate much vertue to an Emplaster which requires more then the simple Diachylon, in the Composition of which, they have order'd Muscilages in a larger quantity. For which reasons, we have prescrib'd the quantity of the Ingredients out of which the Muscilages are to be extracted, and so order'd it, that the Plaister may have its due soliditie, and that the Mass may be considerable.

Could you get Gums in tears, perfectly pure, you might soften and melt them in a Brass Mortar, heated with a hot Pestle, and mix them in the Composition being incorporated with the Turpentine, without keeping the Plaister long upon the Fire: But being foul, and hardly to be got clean enough for internal Medicines, there is no better way then to dissolve, strain, and thicken them, as is directed; especially considering, that it is

a very difficult thing to powder these Gums, especially if they be new; and that for these purposes there is no great regard to be had to the dissipation of their subtle parts.

This Plaister is us'd in all cases where the simple *Diachylon* is prescrib'd; but it operates with much more efficacy than the other, because of the powerful Ingredients which are added. The principal Vertues of it are, to digest, dissolve, discuss, and ripen all sorts of Tumours.

Emplastrum de Mucaginibus.

R. *Radicum Altheæ mundatarum, & minutim incisarum,*
Corticis medii Ulmi pariter incisi,
Seminum integrorum Lini, &
Fenugreci, an. $\frac{3}{4}$ j. ℥.
Aquæ communes, ℥ ij. ℥.

Emplaster of Muscilages.

R. Roots of Marsh-mallows, cleans'd, and cut very small,
 The middle Rind of Elm, cut in the same manner,
 Whole Seeds of Linæ, and
 Fengreek, an. $\frac{3}{4}$ j. ℥.
 Common Water, ℥ ij. ℥.

Put them into a glaz'd Earthen pot, and let them macerate for twenty four hours over a very soft fire, stirring them often with a wooden Spatula; then augment the fire, and boyl them to a sufficient thickness. Mix with this Muscilage

Oleorum Chamomilla,
Liliorum, &
Anethi, &
Medulla cruris Bovis, an. $\frac{3}{4}$ j. ℥.

Oyls of Camomil,
 Lillies, and
 Dill, and
 Marrow of an Oxes Thigh, an. $\frac{3}{4}$ j. ℥.

Boyl the Muscilages again, with the Oyls and the Marrow, over a very gentle Fire, for fear of burning the Muscilages, till the moisture be almost all contum'd.

Tunc,

R. *Cera Citrina,* $\frac{3}{4}$ xx.
Terebinthina, $\frac{3}{4}$ ij.
Ammoniæ,
Galbani,
Opopanax,
Sagapeni, an. $\frac{3}{4}$ ℥.
Croci subtiliter pulverat. $\frac{3}{4}$ ij.

Then,

R. Yellow Wax, $\frac{3}{4}$ xx.
 Turpentine, $\frac{3}{4}$ ij.
 Ammoniac,
 Galbanum,
 Opopanax,
 Sagapen, an. $\frac{3}{4}$ ℥.
 Saffron finely powdered, $\frac{3}{4}$ ij.

Melt the Wax in the hot Oyls where the Muscilages were boyl'd; then take the whole from the fire, and when it is almost cold, first add the Turpentine with the Gums incorporated, being melted or dissolv'd as before directed; then lastly add the Saffron, and make the Plaister into Rolls.

The Vertues of this Plaister are much the same with the former; but it has this particular, not to suppurate Swellings which can be cut'd by dissolution: And therefore it is very much us'd to dissolve Contusions in the Head, Breasts, and other Parts, when you desire to hinder Suppuration, the Matters not being dispos'd to that purpose. However, it will ripen those that may be conveniently brought to Suppuration.

Emplastrum Polychrestum.

R. *Olei Communis,* ℥ ij.
Aquæ fontana ℥ j. ℥.
Ceruse, &
Lithargyri Auri, &
Argenti, an. ℥ ℥.

A Plaister for many Uses.

R. Common Oyl, ℥ ij.
 Fountain-water, ℥ j. ℥.
 Ceruse,
 Litharge of Gold, and
 Silver, an. ℥ ℥.

Powder the Litharge and Ceruse, and having incorporated them with the Oyl and Water cold, boyl them in a Copper pan tinn'd within, as directed for the *Diapalma*; and when

when the Water is almost consum'd, and the Ingredients boyl'd to the thickness of an Emplaster,

R. <i>Cera Citrina, &</i> <i>Terebinthina Veneta, an.</i>	℥ viij.	R. Yellow Wax, and Venice-Turpentine, an.	℥ viij.
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Melt the Wax in little pieces; then take off the Pan from the fire, and add the Turpentine, and when the plaister is almost cold, make it up into Rolls.

This Plaister is call'd *Polychrestum*, because it is proper for many Infirmities; particularly, for all sorts of Ulcers and Burns, Chops and Clefts in the Breasts, Hands, Feet, and Fundament, whether proceeding from Childblains, or otherwise. It is also us'd for the cure of Wounds, and to discuss and dissipate the remainder of Apostemes. It is also proper to make a Saradrap to dress Cauterics.

Emplastrum Nigrum.

The Black Plaister.

R. <i>Olei Communis,</i> <i>Vini, &</i> <i>Aceti, an.</i>	℔ j.	R. Common Oyl, Wine, and Vinegar, an.	℔ j.
<i>Lithargyri Auri, &</i> <i>Ceruse Veneta, an.</i>	℥ viij.	Litharge of Gold, and Venetian Ceruse, an.	℥ viij.

Incorporate the Ceruse and Litharge with the Oyl cold; then mix them with the Wine and Vinegar, boyl them in a Copper tinn'd Pan as before, over a gentle fire at first, but so increas'd as to consume the moisture. Stir the Ingredients with a wooden Spatula, and continue to boyl them over a moderate fire, till they look of a dark colour, and their consistence be a little thicker then that of ordinary Emplastres.

Deinde,

Then,

R. <i>Cera Flava,</i> <i>Colophonie,</i> <i>Pices Navalis, &</i> <i>Terebinthina Veneta, an.</i>	℔ j.	R. Yellow Wax, Colophonie, Black Pitch, and Venice-Turpentine, an.	℔ j.
<i>Lapidis Magnetis preparati,</i> <i>Plumbiusti, &</i> <i>Myrrha Electa, an.</i>	℔ ℥.	Magnet-stone prepar'd, Burnt Lead, and Select Myrrh, an.	℔ ℥.

Melt the Wax, Pitch, and Colophonie in the hot Composition; then take the Pan from the fire, and add the Turpentine, and when the Mass is half cold, mix the Adamant ground upon Porphyrie, moistning it with a little Water, or some Vulnerarie Decoction; add the Lead burnt in a Crucible, with equal parts of Sulphur, to make the Plaister look more black; and the Myrrh powder'd.

This Plaister is highly commended for the cure of all sorts of Wounds, as well made by Cuts or Thrusts, as bruising. It is also us'd for the cure of Ulcers, especially those that are old and obstinate, being very proper to cleanse and consolidate.

Emplastrum Cephalicum.

A Cephalic Emplaster.

R. <i>Gummi Tacamahacca sublimis,</i> <i>Benzoyni,</i> <i>Syracis,</i> <i>Mastiches,</i> <i>Hedera,</i> <i>Olibani,</i> <i>Labdani puri, an.</i>	℥ ij.	R. Odoriferous Tacamahacca, Benjamin, Storax, Mastich, Gum Ivie, Galbanum,	℥ ij.
<i>Cinnamomi, &</i> <i>Terebinth. Veneta, an.</i>	℥ j.	Pure Labdanum, an. Cinnamon, and Venice-Turpentine,	℥ j.
<i>Caryophyllorum, &</i> <i>Nucis moschata, an.</i>	℥ ℥.	Cloves, and Nutmegs, an.	℥ ℥.

Beat

Beat together in a large Brass Mortar, and sift through a Hair Sieve, the Cloves, Cinamon, and Nutmegs. Beat the Tacamahacca, Gum Ivie, Benjamin, Mastich, Olibanum, apart by themselves, and sift them through a Hair Sieve. Melt the Labdanum first of all in a hot Brass Mortar, with a heated Pestle; then the grains of Liquid Storax: after that add the Powders by degrees, well mingled together before, and reduce the whole into a Plaister, beating the Mass as long as the heat of the Mortar and the Ingredients will permit.

You may beat and sift the Labdanum, if it be very dry; but 'tis not much matter, if you observe my Directions. You might also melt the most part of the Gums in the hot Mortar, if they be clear and pure, or if you made a less quantity of Plaister; but the best way is to pulverize them. You may also add a little more Liquid Storax, if you desire the Plaister softer. The hardness of the Mass when the Mortar grows cold, requires a continual heat, while you continue to beat the Ingredients, and to heat the out side when you take them forth: and for the same reasons the Plaister must be roll'd while it is warm.

This Plaister is very much used in *Languedock* and *Provence*. It strengthens the Brain, stays Defluxions, and draws forth the Serositics and thick and viscous Humours that annoy it: which you shall find true by tryal, contrary to the Opinion of those who say, that Emplaisters stop the Pores of the Skin. This Plaister is usually laid upon the Mould of the Head, and therefore called by some *Emplastrum pro Commissuris*, *A Plaister for the Sutures*. It is also appli'd to the Temples, to stay Defluxions that fall from the Eyes and Teeth, and to ease their pain.

Emplastrum Stomachicum.

Rx. <i>Styracis Electæ,</i>	
<i>Tacamahacca odorata, an.</i>	℥ iv.
<i>Succini,</i>	
<i>Caryophyllorum,</i>	
<i>Nucis Moscbata,</i>	
<i>Mastiches, &</i>	
<i>Aloes Succotrine, an.</i>	℥ j.
<i>Cinnamomi,</i>	℥ ss.
<i>Styracis liquida,</i>	q. s.

A Stomach Plaister.

Rx. Select Storax,	
Odoriferous Tacamahacca, an.	℥ iv.
Amber,	
Cloves,	
Nutmegs,	
Mastich, and	
Aloes Succotrine, an.	℥ j.
Cinnamon,	℥ ss.
Liquid Storax,	q. s.

Bruise together in a large Brass Mortar, and sift through a Hair Sieve the Cinamon, Cloves, Nutmegs, and Amber: Beat apart, and sift through the same Sieve the Tacamahacca, Mastich, and Aloes. After that, having heated a large Brass Mortar and Pestle, melt the Rozen and Storax, and having incorporated them with about four ounces of Liquid Storax, add by degrees the Powders, well mingled before; and after you have beaten the Ingredients for some time, to unite them well, take the Mass out of the Mortar while it is warm, and roll it up before it be cold.

There are several Receipts of Stomach Emplaisters, compos'd of a great number of Ingredients, but very ill proportion'd, and must in all things give way to this; of which all the Ingredients, as odoriferous as full of vertue, are very proper to strengthen the Stomach, assist Digestion, stay vomiting, and dissipate Flatuosities, and create an Appetite. This Plaister is to be spread upon Leather, or Silk, like a Scutcheon, and laid warm upon the Stomach, and may be worn for a longer or less time, as necessity requires

Emplastrum Nicotianæ.

Rx. <i>Sevi Aristini,</i>	
<i>Picis Albæ, &</i>	
<i>Resina, an.</i>	℔ j. ss.
<i>Cera Citrina,</i>	℔ j.
<i>Nicotiana recentis confusa,</i>	℔ iij.

The Tobacco Plaister.

Rx. Rams Tallow,	
Black Pitch, and	
Rosin, an.	℔ j. ss.
Yellow Wax,	℔ j.
Fresh Tobacco-leaves bruis'd,	℔ iij.

Bruise

Bruiſe the Tabacco leaves in a Marble Mortar, with a wood'n Peſtle; and having boyl'd them with the Rams Suet, Pitch, and Rozen, over a gentle fire, in a Copper pan tinn'd, ſtirring them from time to time, till the moiſture of the *Nicotian* be almoſt conſum'd, ſtrain and ſtrongly prefs forth the Compoſition: then let it cool, and having thrown away the Fæces remaining at the bottom,

R. Gummi Ammoniaci puri, & Terebinthina Veneta, an.	℥ viij.	R. Gum Ammoniac pure, and Venice Turpentine, an.	℥ viij.
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Melt the Gum Ammoniac in a Braſs Mortar heated, and incorporate it with the Turpentine, and mix them with the other Ingredients, off from the fire; and when the Maſs is almoſt cold, make it up into Rolls.

Nicotian being the foundation of this Plaiſter, and the Ingredient that gives it its principal Vertue, 'tis but reaſon that it ſhould be us'd in a larger quantity then is preſcrib'd in ſeveral Diſpenſatories: and to the end it may equally communicate its Colour and Vertue, inſtead of making uſe of the Juyce, as the Ancients did, the better way is to put in the Leaves whole, and bruiſ'd, according to the foregoing Directions.

This Plaiſter is recommended to mollifie hard internal Tumours, particularly thoſe of the Liver and Spleen, although they ſhould prove to be Schirrous; whence it has acquir'd the name of *The Hepatic and Splenetic Plaiſter*.

Emplaſtrum de Cicutæ.

The Hemlock Plaiſter.

R. Olei Sambuci, Succi Cicutæ, Eithargyri Auri,	℔ ij. ℔ j. ℔. ℔ j.	R. Oyl of Elder, Juyce of Hemlock, Litharge of Gold,	℔ ij. ℔ j. ℔. ℔ j.
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Boyl over a moderate fire the Litharge of Gold powder'd, with the Oyl and Juyce preſcrib'd, ſtirring them continually with a large wood'n Spatula, till the moiſture be almoſt conſum'd, and that the Maſs have the conſiſtence it ought to have:

Tunc,

Then,

R. Succi Cicutæ ad Mellaginem inſpiſſati, ℔ ℔.	R. Juyce of Hemlock thick'nd to the ſub- ſtance of Honey,	℔ ℔.
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Boyl the Juyce to the thickneſs of Honey, and over a gentle fire evaporate the ſuperfluous moiſture.

Poſtea jungatur,

Afterwards add,

Gummi Ammoniaci Aceto Scillitico ſoluti trajeſti, & lento igne ſpiſſati,	℔ j.	Gum Ammoniac diſſolv'd in Vinegar of Squills, paſſ'd through a ſtrong cloth, and thick'nd over a gentle fire,	℔ j.
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Stir the whole continually, till the Emplaſter have acquir'd a laudable conſiſtence, and beſit to be made up in Rolls.

You may alſo make a Plaiſter of Hemlock, making the ſame preparation of it as of *Nicotian*, and mixing it with the ſame Medicaments as are preſcrib'd for the *Nicotian* Plaiſter, and obſerving the ſame Doſes.

The Hemlock Plaiſter may produce the ſame Effects as that of *Nicotian*, being us'd for the ſame Infirmities; and it may be as well call'd *The Hepatic and Splenetic Plaiſter*.

Emplaſtrum Diaphoreticum.

A Diaphoretic Plaiſter.

R. Cera Flava, Myrrha Eleſta, Colophonia, an. Succini Citrini,	℥ xvj. ℥ iv. ℥ iij.	R. Yellow Wax, Select Myrrh, Colophonic, an. Yellow Amber,	℥ xvj. ℥ iv. ℥ iij.
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Terebinthina,

Terebinthina,
Gummi Ammoniacy, &
Galbani in Aceto dissolutorum, trajecto-
rum, & spissatorum, an. ʒ ij.

Sandaraca, ʒ j.
Thuris & Mastichis, an. ʒ ss.

Turpentine,
Gum Ammoniac, and
Galbanum, all dissolv'd in Vinegar, pass'd
through a strong Cloth, and thick'nd,
an. ʒ ij.
Sandarach, ʒ j.
Frankincence and Mastich, an. ʒ ss.

After you have powder'd the Myrrh, Amber, Frankincense, and Mastich, every one apart, and pass'd them through a Silk Sieve, dissolve the Ammoniac and Galbanum in Vinegar, strain through a course Cloth, and thick'n them over a gentle fire. Melt the Wax and Colophonie in a Copper pan. and when the Ingredients are half cool'd, put in the thick'nd Gums incorporated with the Turpentine; and a while after, add the Powders, and the Emplaster is made.

This Plaister is good to draw forth Scrofulities that lie in the Flesh, through the pores of the Body; so that you shall find them in drops upon the Plaister and the Skin. It is a Specific against the Sciatica, the Tumours under the Ears, Swellings of the Hands and Feet, and all Tumours that require not Suppuration. It is also prevalent against the Scorbutic Hardnesses of the Legs, Nerves, and Joynts; against Contusions, to discharge them of the Scrofulities that fall upon them at the time of Fractures and Dislocations, and to allay the pains thereof.

Emplastrum de Galbano.

R. Galbani, ʒ vj.
Emplastri de Meliloto, &
Diachyli simplicis, an. ʒ iij.
Cera Flava, ʒ ij.
Terebinthina Veneta, ʒ j.
Crocii Pulverati, ʒ vj.

The Galbanum Plaister.

R. Galbanum, ʒ vj.
Emplaster of Melilot, and
Simple Diachylon, an. ʒ iij.
Yellow Wax, ʒ ij.
Venice Turpentine, ʒ j.
Saffron pulveriz'd, ʒ vj.

Dissolve the Galbanum in Vinegar, pass it through a strong Cloth, and thick'n it over a moderate Fire: Melt the Wax, cut in pieces, with the Diachylon and Melilot, over a soft Fire: then add the Turpentine, incorporated with the Galbanum. Then take it off the fire, stir it till it begins to grow thick, and lastly add the Saffron powder'd.

This Plaister has been very much experimented for the softning and dissolving of hard and scirrhous Tumours; to assuage the Pains of the Shoulders, the Breast, the Sides, the Nipples, the Hypochondrium, Liver and Spleen, caus'd by Flatuosities or cold Humours: For, it softens, assuages, digests, dissolves, and powerfully discusses Matters gather'd together in those Parts.

Emplastrum de Meliloto.

R. Summitatum floridarum Meliloti, ʒ iij.
Radice Iridis,
Seminis Fœnugreci,
Foliorum Absinthii,
Gummi Ammoniacy,
Myrrhe, an. ʒ j.
Radice Cyperi,
Althea,
Nardi Celtica,
Baccarum Lauri,
Florum Chamomilla,
Crocii, an. ʒ ss.
Cera Citrina, ss j.
Resina,
Picis Alba,
Sevi Hircini, an. ʒ iv.
Terebinthina Veneta, &
Olei Absinthii, an. ʒ iij.

Melilot Plaister.

R. The flowrie Tops of Melilot, ʒ iij.
Root of Orrice,
Fengreek-seed,
Leaves of Wormwood,
Gum Ammoniac,
Myrrh, an. ʒ j.
Roots of Cyperus,
Marsh-mallows,
Celtic Nard,
Laurel Berries,
Flowres of Camomil,
Saffron, an. ʒ ss.
Yellow Wax, ss j.
Rosin,
White Pitch,
Goats Tallow, an. ʒ iv.
Venice Turpentine,
Oyl of Wormwood, an. ʒ iij.
Dry

Dry and pulverize the Saffron apart; beat the Roots, Seeds, Berries, Herbs, Flowers, and also the Gums, being chosen very pure, and pass them through a Silk-sieve: Melt the Wax over a gentle fire in a Copper-pan, together with the Rosin, white Pitch, and Goats Tallow, after which add the Turpentine and Oyl of Wormwood; then take the Pan from the fire, let it cool a little, then incorporate the Powders by degrees, and when all the Ingredients are well united, make up the Plaister in Rolls, and paper it up for use.

The most part of the Receipts of Melilot in the Dispensatories are very much perplex'd, as well for the great number of Medicaments, the irregular proportions, as the various and irrational preparations: And therefore I am perswaded this Receipt will be admitted before others, when the regularity of the proportions, and the easiness of the preparation shall be examin'd.

This Plaister is chiefly recommended to thicken and discuss hard and condens'd matters: among the rest, the inveterate hardnesses of the Spleen, Liver and Stomack, and all the Bowels. It is also proper to bring down the extension of the Hypochondriums, to dissipate Flatuosities, and appease the pains that are caus'd thereby.

Emplastrum de Betonica.

Rx. *Foliorum virentium*
Betonica,
Lauri,
Plantaginis,
Apii, &
Verbena recta contusorum, an. M iij.
Rosina,
Picis Alba,
Terebinthina Veneta, &
Cera Citrina, an. lb ij.

The Betony-Plaister.

Rx. The green leaves of
 Betony,
 Laurel,
 Plantain,
 Parsley, and
 Vervain rightly bruis'd, an. M iij.
 Rosin,
 White Pitch,
 Venice-Turpentine, and
 Yellow Wax, an. lb ij.

Bruise the leaves in a Marble-Mortar with a wooden Pestle; melt the Wax, Pitch and Rosin over a gentle fire in a tinn'd Copper-Pan, and afterwards the Turpentine; and then having mix'd the bruis'd Herbs with them, boil them together, stirring them continually over a gentle fire, till the moisture of the Herbs be almost all consum'd: Strain the Ingredients hot through a New Cloth, and press them strongly forth; when the straining is almost cold, separate and throw away the Feces, and melt it again over a soft fire: Take it off; and when it begins to thicken, and to be half cold,

Rx. *Mastiches, &*
Olibani subtiliter pulverat. an. ʒ ij. Rx. Mastich, and
 Olibanum very finely powder'd, an. ʒ ij.

Mix them with the Composition, and make up the Plaister into Rolls.

This Plaister bears the Name of Betony, as being the principal Ingredient: There are several Receipts, some less, some more compounded. Some only make use of the Juices of these Plants: But certainly the Herbs bruis'd and boil'd among the other Ingredients, are incomparably better for the reasons already alledg'd. Some use black Pitch, though inferiour to the white, as well because it discolours the Plaister, as for that it has lost much of its good parts by the burning of the branches of the Trees from whence it was drawn; whereas white Pitch flows of it self from the Tree, and possesses all those volatile parts which are dissipated in the other.

The use of this Plaister is to heal wounds of the Head, which it cleanses and cicatrizes. It also fetches out of the pores of the Skin the serosities that stay in several parts of the body, especially those of Sciatica's and Rhumatismes. It also dissolves Contusions, and softens Corns in the Feet.

Emplastrum Manus Dei.

R. Olei communis,	℥ viij.
Lithargyri Auri præp.	℥ iiij.
Cera Citrina,	℥ ij.
Terebinthina Venet.	℥ j.
Galbani,	
Opoponacis,	
Ammoniacy,	
Sagapeni,	
Myrrhe,	
Olibani,	
Mastiches, an.	℥ viij.
Olei Laurini,	℥ vj.
Lapis Calaminaris,	
Magnetis,	
Aristolochia longa & rotunda, an.	℥ iiij.

The Plaister of Gods Hand.

R. Common Oyl,	℥ viij.
Litharge of Gold prepar'd,	℥ iiij.
Yellow Wax,	℥ ij.
Venice-Turpentine,	℥ j.
Galbanum,	
Opoponax,	
Ammoniac,	
Sagapen,	
Myrrh,	
Olibanum,	
Mastich, an.	℥ viij.
Oyl of Laurel,	℥ vj.
Lapis Calaminaris,	
Loadstone,	
Long and round Birthwort, an.	℥ iiij.

Grind the *Lapis Calaminaris* and Loadstone upon a Porphyry moisten'd with some vulnerary water, and dry them. Beat together in a large Brass-Mortar the two Birthworts, and the Myrrh and Mastich apart; sift all the Powders together thorough a Silk-sieve; then put the full weight of the Galbanum, Ammoniac, Opoponax, and Sagapen, well bruise'd, into an Earthen glaz'd pot, and dissolve them over a gentle fire, in about two pints of good Vinegar; strain them hot through a strong Cloth, and having well press'd them, return that which remains in the Cloth over the fire; and having dissolv'd it in new Vinegar, strain'd and press'd it as before, evaporate by degrees over a gentle fire the superfluous moisture of the Vinegar, and boil the Gums till they are sufficiently thick, at which time incorporate the Turpentine, and keep the whole apart.

Then having put the Litharge of Gold prepar'd in Powder in a Copper-Pot tinn'd, incorporate it cold with the Oyl, stirring them continually with a large wood'n Spatula; then mix therewith three pints of common water, and boil them together over a good fire, stirring them without intermission, till the whole has acquir'd the consistence of a solid Emplaster: At which time melt the Wax; and then taking the Pot off the fire, when the whole is somewhat cold, add the Gums incorporated with the Turpentine, and Oyl of Laurel, and lastly the Powders, and be sure that all the Ingredients be well united together.

Manus Dei Plaister is very famous, and has been much us'd for a long time, so that many Ladies of Quality take the pains to make it, and distribute it to the Poor, whom I advise to be careful of the directions here giv'n for its preparation: For it is not enough to have a good Receipt, if the Medicine be spoil'd in the preparation. The addition of the water causes the Plaister to be sooner boil'd, keeps the Litharge from sinking, and the Oyl from burning.

Which occasions me to give this farther *Item*, that you must stay till the Litharge and Oyl have acquir'd the consistence of a solid Plaister, before you add the Wax; otherwise by the addition of the weight of the Wax, which you must be constrain'd to augment, the Plaister would prove too soft.

This Plaister is every day successfully us'd for the cure of all sorts of Wounds, Ulcers, Contusions and Tumours: It mollifies, digests, dissolves, and brings to suppuration such matters as require it: For it never suppurates those which may be dissipated by transpiration, or otherwise; and when it has ripen'd and drawn the matters forth, it draws no more, but cleanses, cicatrizes, and consolidates altogether.

Emplastrum Andreae Cruce.

R. Resine,	℥ xij.
Gummi Elemmi,	℥ iiij.
Terebinthina Veneta, &	
Olei Laurini, an.	℥ ij.

The Plaister of Andrea Cruce.

R. Rosin,	℥ xij.
Gum Elemmi,	℥ iiij.
Venice-Turpentine, &	
Oyl of Laurel, an.	℥ ij.
Break	

Break the Rosin and Gum Elemmi, and having melted them together over a gentle fire, add the Turpentine, and Oyl of Laurel; and when they are all well incorporated, strain the whole through a Cloth, to separate the filth that may be mix'd with the Gums; then let the Plaister cool, and roll it up.

This Plaister is us'd for wounds of the Breast, for which it serves without a Tent. It is also proper to cleanse and consolidate other wounds and Ulcers, to dissipate Contusions, strengthen the parts in Fractures and Dislocations of the bones, and to draw forth from the Pores such ferrous humours, as are the cause of the Sciatica and Rhumatismes.

Emplastrum Magneticum Angeli Salæ.

Angelus Sala's Magnetic Plaister.

R. Sagapeni,
Ammoniaci, &
Galbani, an.
Cera Flava,
Terebinthina, an.
Magnetis Arsenicalis,
Terra Vitrioli lota,
Olei succini,

℥ iij.

℥ iij. ℞.

℥ iij.

℥ j.

℥ ℞.

R. Sagapen,
Ammoniac, and
Galbanum, an.
Yellow Wax,
Turpentine,
Arsenical Magnet,
Earth of Vitriol wash'd,
Oyl of Amber,

℥ iij.

℥ iij. ℞.

℥ iij.

℥ j.

℥ ℞.

Angelus Sala, the Author of this Plaister, prepares it thus.

After you have dissolv'd the Gums in twenty ounces of Vinegar of Squills over a moderate fire, pass them through a strong Cloth, and boil them to the ordinary consistence of Emplaisters, melt the Wax in a Copper-Pan with the Oyl of Amber, and having taken them off the fire, incorporate with them the Turpentine, Earth of Vitriol, and Arsenical Magnet finely pulveriz'd, together with the Gums thicken'd, and the Plaister is made.

Magnes Arsenicalis,

The Arsenical Magnet.

R. Antimonii Hungarici,
Sulphuris Flavi, &
Arsenici Chrysellini, an.

℥ ij.

R. Hungarian Antimony,
Yellow Sulphur,
Chrystalline Arsenic, an.

℥ ij.

Pulverize two ounces of pure Antimony, as much yellow Sulphur, and as much Chrystalline Arsenic; and having mingl'd them together, put them over a Sand-bath moderately hot, keep the Cucurbit there till the Ingredients are altogether dissolv'd, which you shall know by putting into the substances a small iron rod, for then they will stick to the rod and rope like Turpentine, but of a red shining colour, and like to Marcasites: Then let the Matters cool, break the Cucurbit, and keep the mass to be pulveriz'd, when occasion requires.

There are some, who to prepare Earth of Vitriol, sublime it with equal parts of Salt-Ammoniac: But besides that it is a difficult thing so to sublime the acid and salt parts either of the one or the other, but that there will remain some portion among the Earth, there is no need of adding Salt-Ammoniac to the Vitriol, nor any thing else to obtain the Earth, in regard you may easily find it at the end of the Distillation. As for washing the Earth of Vitriol, which some contend against, I think the Authors judgment is to be follow'd, who prescribes it wash'd. Besides, I am of opinion, that a dry Earth depriv'd of all the parts necessary to compose a mix'd body, is more proper to receive and impregnate it self with new substances, then if it had all that is requir'd to make up the body of a real Vitriol; considering that it is not intended to cut or attenuate, but to suck up, or draw to it self the superfluous matters of the wounds, which may have some similitude of substance with the acid or salt parts which are found in the composition of the Vitriol. And to shew that this Earth still retains a Magnetic faculty, we find by experience, that being expos'd to the Air for some time, especially in the night, it becomes Vitriol, and is able to afford almost the same Spirit, and the same parts which it had before Distillation.

The Author of this Plaister cries it up highly, and affirms, that being apply'd upon Bubo's and Pestilential Carbuncles, it ripens them quickly, opens them, and draws at the same time the Venom from the center to the circumference, by its magnetic faculty and similitude of substance, not permitting the wound to close, till all the venomous matter be drawn forth. He also assures us, that it makes the wound fit to be cleans'd

and consolidated, when all the virulent matter is drawn forth. It also perfectly cures the Kings-Evil, drawing the scrofulous matters from the remote parts of the body, perfecting it's work in five or six weeks; after which, it closes up the part without the use of any other Remedy: However, the Patient must be careful to purge, during the Cure, and to use Specific Decoctions, and other internal Remedies proper for the distemper. Being laid to old, putrid, and obstinate Ulcers, it draws out the Venom in two or three days, and causes a black Scab, which is to be soften'd with Butter, which being taken off, you shall find the flesh underneath very clean and lively.

The Arsenical Magnet is only a gentle Caustic, which operates with ease and success.

Emplastrum Divinum.

The Divine Plaster.

Rx. Lithargyri Auri præp.	℥ i ℥.	Rx. Litharge of Gold prepar'd,	℥ i ℥.
Olei communis,	℥ iij.	Common Oyl,	℥ iij.
Aqua Fontana,	℥ ij.	Fountain-water,	℥ ij.

Boil them together to the thickness of an Emplaster.

Deinde permisce

Add then

Lapidis Magnetis præp.	℥ vj.	Magnet-stone prepar'd,	℥ vj.
Gummi Ammoniaci,		Gum-Ammoniac,	
Galbani,		Galbanum,	
Opoponacis, &		Opoponax,	
Bdellii, an.	℥ iij.	Bdellium, an.	℥ iij.
Myrrha,		Myrrh,	
Olibani,		Olibanum,	
Mastiches,		Mastich,	
Viridis Aeris, &		Verdigrease, and	
Aristolochia Rotunda, an.	℥ i ℥.	Round Birth-wort, an.	℥ i ℥.
Cera Flava,	℥ viij.	Yellow Wax,	℥ viij.
Terebinthina,	℥ iij.	Turpentine,	℥ iij.

Dissolve the Ammoniac, Galbanum, Bdellium and Opoponax in Vinegar over a soft fire, and thicken them as before directed; prepare the Magnet, as before directed: Beat the Olibanum, Mastich, Myrrh and Birthwort apart, and having boil'd and thicken'd the Litharge, Oyl, and Water, as before, then melt the Wax in the hot Composition; and when the Pan is off the fire, and the matters half cold, add the Gums thick'nd and incorporated with the Turpentine; then the Magnet mix'd with the Birthwort, Myrrh, Mastich, and Olibanum; and lastly, the Verdigrease; and having well stirr'd and mix'd all the Ingredients together, make up the Plaster into Rolls.

The virtues and uses of this Plaster are much the same with those of *Mannus Dei*: It is nevertheless more cleansing, and accompani'd with some Acrimony, by reason of the Verdigrease which it contains. Nevertheless, they may be us'd for the same purposes, the one as well as the other, and the one instead of the other.

Emplastrum Paracelsi.

Paracelsus.

Rx. Olei communis,	℥ ij.	Rx. Common Oyl,	℥ ij.
Lithargyri Auri,	℥ j.	Litharge of Gold,	℥ j.
Cera Flava,	℥ ℥.	Yellow Wax,	℥ ℥.
Terebinth. venet.	℥ iij.	Venice-Turpentine,	℥ iij.
Gummi Ammoniaci, &		Gum-Ammoniac, and	
Elemni, an.	℥ ij.	Elemni, an.	℥ ij.
Olei Laurini,	℥ i ℥.	Oyl of Laurel,	℥ i ℥.
Bdellii,		Bdellium,	
Opoponacis,		Opoponax,	
Galbani,		Galbanum,	
Mastiches,		Mastich,	

Myrrha,

Myrrh,
Thuris,
Aloes,
Radice Aristolochie Rotunda,
Lapide Calaminaris, an.

℥j.

Myrrh,
Frankincense,
Aloes,
Root of round Birth-wort,
Lapis Calaminaris, an.

℥j.

Having incorporated the Oyl and the Litharge in a large Plaister-Pan, and mix'd with them about a pint and a half of water, boil them together, stirring them continually with a large wood'n Spatula; and when they are boil'd, melt the Wax in them: then take the Pan from the fire, and mix first the Gummi Elemmi, melted with the Oyl of Laurel, and strain'd through a Linnen-cloth; after which, add the Ammoniac, Galbanum, Bdellium, and Opoponax dissolv'd in Vinegar, strain'd through a strong Cloth, and well thick'nd over a soft fire, and incorporated with the Turpentine; then add the Birthwort-root and Calaminaris finely powder'd; and lastly, the Powders of Myrrh, Aloes, Frankincense, and Mastich; and having well incorporated the whole, make up the Plaister into Rolls.

The vertues of this Plaister are much the same with those of *Mannus Dei*, and the Divine Plaister, nevertheless it dries and cicatrizes more.

Emplastrum de Linamento.

A Plaister of Lint.

R. Linamenti veteris minutim incisi, ℥ viij.
Olei communis, &
Aqua Fontana, an. ℔ iij.

R. Old Lint cut small, ℥ viij.
Common Oyl, and
Fountain-water, an. ℔ iij.

Boil the Lint in the Oyl and Water prescrib'd over a gentle fire, till a third part of the water be consum'd; then strain and strongly press out the whole.

Expressioni adde

To the straining add

Cerusa Veneta pulverat. ℔ ij.

Venice-Ceruse, ℔ ij.

Boil them together in a Copper-Pan over a moderate fire, stirring them continually, to the substance of ordinary Plaisters; then

In illis liquefiant

Melt in the hot Composition

Cera Citrina, ℥ xij.

Yellow Wax, ℥ xij.

And when the whole is half cold,

R. Myrrh,
Mastiches,
Olibani, an. ℥ iij.
Aloes electi, ℥ ij.

R. Myrrh,
Mastich,
Olibanum, an. ℥ iij.
Select Aloes, ℥ ij.

Powder them very finely, and mix them with the rest; and when all the Ingredients are well incorporated, make up the Plaister into Rolls.

Emplastrum Ischiadicum.

A Plaister for the Sciatica.

R. Cera Citrina,
Picis Alba, &
Nigra, &
Terebinthina, an. ℥ iij.
Gummi Ammoniacy, &
Florum Sulphuris, an. ℥ ij.

R. Yellow Wax,
Pitch white, and
Black, and
Turpentine, an. ℥ iij.
Gum-Ammoniac, and
Flowers of Sulphur, an. ℥ ij.
Olibani,

Olibani,
Ireos, &
Fengreeci pulveratorum, an.

℥j.

Olibanum,
Orrice, and
Fengreek powder'd, an.

℥j.

Powder the Orrice, Fengreek, and Olibanum a-part; and having mix'd them with the Flowers of Sulphur, melt the Ammoniac, the purest you can get, in a large Brazen-Mortar heated, and incorporate it with the Turpentine; then having melted the Wax and the Pitch in a small Copper-Pan over a gentle fire, and pass'd them, mingle therewith the Ammoniac incorporated with the Turpentine; when the Composition is half cold, mix the Powders, and make up the Plaister into Rolls.

This Plaister is very effectual against Sciatic Gouts, drawing forth the serosities which are usually the cause of those Evils, and eases the pains thereof. It is also very proper against Rhumatismes, and dissolves pains that are caus'd by serosities gather'd in the Flesh. You must be careful to take off the Plaister night and morning, and to wipe the part affected, before you lay it on again.

Emplastrum Stomachicum.

A Stomach-Plaister.

Rx. Gummi Tacamahacca sublimis, ℥iiij.
Labdani puri,
Benjamini,
Succini, &
Resina Storacis, an. ℥ij.
Styracis Liquide, ℥j.
Olei Nucis Moschata, ℥ss.

Rx. Odoriferous Tacamahacca, ℥iiij.
Pure Labdanum,
Benjamin,
Amber, and
Rosin of Storax, an. ℥ij.
Liquid Storax, ℥j.
Oyl of Nutmegs, ℥ss.

Pulverize very finely a-part the Amber, Benjamin, and Tacamahacca; prepare the Rosin of Storax, as for the Treacle: Heat a large Brass-Mortar and Pestle, and having melted the Labdanum therein, incorporate with it the Rosin of Storax, the Liquid Storax, and by little and little, the Powders in the last place; and having beaten the Mass as long as the heat of the Mortar, and the Ingredients will permit, take it out, and make it into Rolls, to be cover'd with Paper.

This Plaister is of a pleasing scent; it wonderfully fortifies the Stomach, dissipates Wind, gives an Appetite, assists Concoction of the Nourishment, and stays Vomiting, being laid upon the pit of the Stomach.

There are several Stomach-Emplastres in several Dispensatories, but far inferiour in virtue and odour.

This Plaister may be us'd instead of the Mastich-Plaister, if you only add to its Composition two ounces of Powder of Mastich.

Emplastrum pro Matrice.

A Plaister for the Matrix.

Rx. Galbani purificati & spissati, ℥iiij.
Tacamahacca, &
Cera Citrina, an. ℥iiij.
Myrrha Electa, &
Terobimhina, an. ℥iiij.
Asa-Fetida, ℥j.
Pinguinis in cistide Castorei contenta, ℥ss.
Oleum stillatissimum Succini, &
Ruta, an. ℥j.

Rx. Galbanum purifi'd and thicken'd, ℥iiij.
Tacamahacca, and
Yellow Wax, an. ℥iiij.
Select Myrrh, and
Turpentine, an. ℥iiij.
Asa-fetida, ℥j.
The fat contain'd in the bag of the Castor, ℥ss.
Distill'd Oyls of Amber, and
Rue, an. ℥j.

The Impurities usually mix'd with Galbanum, constrain us to dissolve it with the Asa-Fetida in good Vinegar, and to pass them through a Cloth, and to thicken them over a very soft fire: After which, unite these Gums with the Turpentine, to incorporate the whole with the Turpentine cut into little pieces, and melted over a very soft fire in a Copper-Pan; add the Castors fat, and a while after the Myrrh and Tacamahacca powder'd; lastly, the distill'd Oyls, and then stir and incorporate the whole well together with a wood'n-Pestle, and the Plaister is made.

This

This Plaister, as it is here prescrib'd, is compos'd of Ingredients well selected, and well proportion'd, and the preparation is not difficult. It is proper to quiet the irregular motions of the Matrix, to suppress the vapours, and prevent the Suffocations by them caus'd. It is to be spread upon Leather proportionable, and laid upon the Navel, tending it lye on as long as is necessary. Sometimes you may put a grain of Musk or Cotton upon the middle of the Plaister before you lay it on, or else put up at the same time some few grains of Musk or Civet wrapt in Cotton into the Neck of the Matrix.

Emplastrum Oxycroceum.

R. Cera Citrina,
Picis Navalis, &
Colophonia, an. ℥j.
Terebinthina, ʒiiij.
Gummi Ammoniack, &
Galbani aceto dissolutorum, trajectorum &
spissatorum,
Croci,
Myrrha, &
Thuris subtiliter pulveratorum, an. ʒiiij.

Oxycroceum-Plaister.

R. Yellow Wax,
Black Pitch, and
Colophony, an. ℥j.
Turpentine, ʒiiij.
Gum-Ammoniac, and
Galbanum dissolv'd in Vinegar, strain'd
and thick'nd,
Saffron,
Myrrh, and
Frankincense very finely pulveriz'd, an. ʒiiij.

Having finely pulveriz'd apart the Saffron, Myrrh, Frankincense and Mastich, and dissolv'd in Vinegar, strain'd and thick'nd over a gentle fire the Galbanum and Ammoniac, melt the Wax over a fire as gentle, adding thereto the Pitch, and Colophony, being well chosen: Then take the Pan off the fire, and add the Galbanum and Ammoniac, incorporated before with the Turpentine; a little while after add the Powders, and mix the whole well.

This Plaister takes its Name from the Saffron and Vinegar which is us'd for the dissolution of the Gums: It softens, and dissolves hardneses, allwages the pains of the Nerves and Muscles, dissipates Contusions, fortifies the parts in Fractures and Dislocations of Bones; causes the Serosities there gather'd together to transpire, prevents new ones from flowing down, and helps very much the Generation of Callosity in the Fractures of Bones.

Emplastrum contra Herniam.

R. Pellem Arietinum recentem cum sua lana
in partes dissctam; coque igne moderato, in
sufficiente quantitate aqua, donec pellis om-
nino in aqua dissoluta fuerit. Coletur de-
coctum, lanæque fortiter exprimatur. In
expressione coquantur Granorum alborum
visci quercini, vel alterius Arboris astrin-
gentis, ʒvj.

Lumbricorum terrestrium in vino lotorum ʒiiij.
ad ipsorum dissolutionem.

Deinde coletur, & exprimantur; expressio
vero cum Lithargyri Auri preparati, &
Oleorum Cydoniorum & Myrsinorum, an.
℥j. in Emplastrum coquantur.

In illis deinde Liquefiant,
Cera Citrina,
Picis Navalis,
Resina, ℥j.

A Plaister against Bursnes.

R. Take the skin of a Ram newly kill'd,
with the Wooll, cut in pieces; boil it
over a moderate fire in a sufficient quan-
tity of water, till the skin be altogether
dissolv'd in the water: Strain the De-
coction, and strongly press forth the
Wooll. In the straining, boil the white
Berries of Mistle-toe, or for want of
them, of any other astringent Tree, ʒvj.
Earth-worms wash'd in Wine ʒiiij. till
they are dissolv'd.

Then strain and press them out, boil the
strain'd and press'd liquor with Ly-
tharge of Gold prepar'd, Oyls of Quin-
ces, and Whortle-berries, an ℥j. over
a gentle fire in a Copper-Pan, stirring
them continually to the thickness of an
Emplaster.

In these melt, being cut into little pieces,
Yellow Wax, ℥j.
Black Pitch,
Rosine,

Terebinthina,

<i>Terebinthina, an.</i>	℥ ss.	<i>Turpentine, an.</i>	℥ ss.
<i>Deinde addantur,</i>		Then take the Pan off the fire, and add,	
<i>Gummi Ammoniacy,</i>		Gumm-Ammoniac and Galbanum dis-	
<i>Galbani,</i>		solv'd in Vinegar, strain'd and thick'nd,	
		and incorporated with the Turpentine,	
<i>Myrrha,</i>		Myrrh,	
<i>Thuris,</i>		Frankincense,	
<i>Masticbes, &</i>		Mastich; and	
<i>Sanguinis humani vel Porcini exsiccati, an.</i>	℥ iiij.	Mans or Hogs blood dry'd, an.	℥ iiij.
<i>Aristolochia longa & rotunda,</i>		Birth-wort long and round,	
<i>Symphitis majoris & minoris</i>		Cumfrey greater and lesser,	
<i>Gallarum,</i>		Galls,	
<i>Gyps,</i>		Plaster,	
<i>Boli Armena, &</i>		Bole-Armenian, and	
<i>Mumia, an.</i>	℥ iiij.	Mummy, an.	℥ iiij.

Fiat Emplastrum.

After the Gums mix the Powders of Man's Blood, Birthwort, Cumfrey, Galls, Mummy, Plaster, and Bole-Armenian sifted through a Silk-sieve; and lastly, the Myrrh, Frankincense, and Mastich pulveriz'd apart, and incorporate the whole well together, by which means the Plaster will be of a due consistence, and keep long.

The non-plus which the most part of Apothecaries are at in the Composition of this Plaster, by reason of the irregular Receipts, and ill proportion'd quantities in most Dispensatories, requiring something better order'd, I could not forbear to give the satisfaction of this Receipt and Preparation.

This Plaster, taking its name from the use, is to be apply'd to the part, after the Intestine is put up, and must be kept on with a Truss. By fortifying the part relax'd, it causes the Intestine to stay in its place; and by continuing it, the parts resume entirely their natural strength. It is also of great use in Fractures and Dislocations.

You may also prepare an Emplaster against Bursness with less Ingredients, more astringent, and more effectual.

Emplastrum aliud contra Herniam.

R. Exuvias Anguillarum non salitas, & in aqua Calcis Latas, quantum libuerit. Coque in Lixivio donec dissolvantur, & crassificent instar glutinis.

Postea accipe,
Glutinis illius traeliti, ℥ iiij.
Lapis Hamatilis,
Sacchari Saturni,
Stanni Usti, an. ℥ iiij.
Gummi Ammoniacy in aceto acerrimo soluti,
traeliti, & spissati, ℥ ii ss.
Olei Myrrha stillatarii, ℥ ss.

Another Plaster against Bursness.

R. Eel-skins never salted, newly flea'd, and wash'd in Lime-water, what you please. Boil them over a gentle fire, in clean Lye of ordinary Cinders, till they dissolve and grow thick like Glue.

Then take,
Of this Glue being strain'd, ℥ iiij.
Blood-stone,
Saccharum Saturni,
Burnt Pewter, an. ℥ iiij.
Gum-Ammoniac dissolv'd in strong Vinegar, strain'd and thick'nd, ℥ ii ss.
Oyl of Myrrh distill'd, ℥ ss.

Put all these together, with the Glue finely powder'd, into a glaz'd Earthen-pot, and boil them all together over a very gentle fire, stirring them continually, till they have acquir'd the consistence of an Emplaster, and adding at last the distill'd Oyl of Myrrh.

This Plaster is one of the best that ever was invented to cure a Rupture, apply'd like the former.

Emplastrum

Emplastrum pro Fracturis & Luxatione Ossium.

R. Radicum Althea mundatarum & minutim incisarum, $\frac{3}{4}$ vj.
 Aqua Fontana, lb iij.
 Infundantur horis viginti quatuor super ignem exiguum, sapis agitando spatula lignea, deinde lento igne coquantur ad Muscilaginis sufficientem spissitatem; colentur & fortiter exprimantur, serveturque Muscilo. Interea,
 R. Radicum & foliorum Fraxini, & Consolida majoris, Baccarum & foliorum Myrti, & Foliorum salicis, an. Mj.
 Contusa omnia coquantur igne lento, ad dimidia partis consumptionem in Aqua Extinctionis Fabrorum, & Vini austeri sub finem additi, an. lb ij.

Postea colentur & exprimantur, deinde

R. Lithargyri auri, & Argenti preparatorum, an. $\frac{3}{4}$ viij.
 Minii, $\frac{3}{4}$ ij.
 Olei Rosae, & Myrtini, & Savi Hircini, an. lbj.

Melt the Goats-Suet among the Oyls in a large Plaster-Pan, and having incorporated them first cold, with the Minium and Litharges powdered, and afterwards with the Decoction and Muscilages, boyl them over a moderate Fire, stirring them continually with a large Wooden-Spatula to the thickness of Emplaisters.

Tunc

R. Cera Citrina, $\frac{3}{4}$ viij.
 Terebinthina, $\frac{3}{4}$ iij.

Melt the Wax in the Composition, and taking the Pan from the Fire, when it is somewhat cold, mix the Turpentine.

Deinde permisceantur,

R. Boli Armena, Terra Sigillata, Olibani, Myrrha, & Mastiches subtiliter pulveratorum, an. $\frac{3}{4}$ iij.

Incorporate them well together and the Plaster is made.

This Plaster is one of those that are ill-proportion'd in the Prescriptions of the Ancients. For seven Ounces, two Drams of Minium and Litharge did not make the just proportion for eighteen Ounces of Oyls or Suet prescrib'd for this Emplastrum: Besides that they made use of too great a quantity of Muscilages, and Decoction in the boying of the same Ingredients. Which forc'd me to seek for a true proportion of Medicaments, and to give a more exact Prescription than that of the Ancients.

The name of this Emplaster denotes the Virtues and Uses. It fortifies the parts by its astringent, prevents the flowing of humours, and causes the growth and perfection of the callous flesh requisite in Fractures.

A Plaster for Fractures and Dislocations of Bones.

R. Roots of Marsh-Mallows cleans'd and cut very small, $\frac{3}{4}$ vj.
 Fountain-water, lb iij.
 Infuse them 24 hours over a soft fire, stirring them often with a wood'n-Spatula: Then boil them over a gentle fire, to the due thickness of a Muscilage: Then strain and press out the Muscilage with a good strength, and set it aside. Then
 R. Roots and leaves of Ash, and Greater Gumfrey, Berries and leaves of Myrtle, and Leaves of Willow, an. Mj.
 Bruise them all together, and boil them to the consumption of the half part in Smiths water, and Sour Wine added toward the end, an. lb ij.

After that strain and press them out; then

R. Litharge of Gold, and Silver prepar'd, an. $\frac{3}{4}$ viij.
 Minium, $\frac{3}{4}$ ij.
 Oyls of Roses, and Myrtles, and Goats-Suet, an. lbj.

Then

R. Yellow-Wax, $\frac{3}{4}$ viij.
 Turpentine, $\frac{3}{4}$ iij.

Lastly add to the whole,

R. Bole Armenian, Seal'd-Earth, Olibanum, Myrrh, and Mastich all very finely powdered, an. $\frac{3}{4}$ iij.

Emplastrum de Ranis cum Mercurio.

R. <i>Ranas Vvientes,</i>	N ^o xij.
<i>Lumbricorum terrestrium purgatorum,</i>	℥ iij.
<i>Radicum Ebuli, &</i>	
<i>Enula campana, an.</i>	℥ iij.
<i>Schœnanthi,</i>	
<i>Stœchadis Arabica, &</i>	
<i>Matricaria, an.</i>	Mj.
<i>Aceti Fortis,</i>	
<i>Vini austeri, an.</i>	℔ ij.

Plaster of Frogs with Mercury.

R. Live Frogs,	N ^o xij.
Earth-worms purg'd,	℥ iij.
Roots of Dwarf-Elder, and	
Elecampane, an.	℥ iij.
Camels Hay,	
Arabian Stœchas, and	
Fetherfew, an.	Mj.
Strong Vinegar,	
Austere Wine, an.	℔ ij.

Bruse the Roots of the Dwarf-Elder and Elecampane, and put them into a glaz'd Earthen-pot with the Vinegar and Wine, and after you have let them boil a while, put in the live-Frogs, and then the Worms. Cover the Pot, and boil the whole over a moderate fire for half an hour: Then having strain'd and press'd out the whole,

R. <i>Lithargyri auri preparati,</i>	℔ ij.
<i>Pinguinis Porci, &</i>	
<i>Vtuli, an.</i>	℥ ix.
<i>Oleorum Camomilla,</i>	
<i>Anethi,</i>	
<i>Liliorum,</i>	
<i>Laurini, &</i>	
<i>Spica, per infus. & decoct. parat. an.</i>	℔ ℞.

R. Litharge of Gold prepar'd,	℔ ij.
Barrows fat, and	
Calves fat, an.	℥ ix.
Oyls of Camomile,	
Dill,	
Lillies,	
Laurel, and	
Spike, prepar'd by Infusion and decoction,	an. ℔ ℞.

Melt the Greases in the Oyls, and incorporate the Litharge with this mixture cold; and then with the Decoction reserv'd, in a Plaster-pan; then boil them over a moderate fire, stirring them continually with a wood'n Spatula, till the moisture being almost all consum'd, the whole have acquir'd the thickness of ordinary Emplasters.

In illis deinde liquefiant,

<i>Cera Citrina,</i>	℔ j.
<i>Axungia Viperina,</i>	℥ iij.

Then melts therein,

Yellow Wax,	℔ j.
Vipers fat,	℥ iij.

Melt the Wax first, and then the Vipers Grease, and when the whole is half cold,

R. <i>Pulveris Olibani,</i>	℥ iij.
<i>Euphorbii,</i>	℥ i ℞.
<i>Croci,</i>	℥ ℞.
<i>Mercurii vivi,</i>	℔ j.
<i>Terebinthina, &</i>	
<i>Storacis liquida, an.</i>	℥ iij.

R. Powder of Olibanum,	℥ iij.
Euphorbium,	℥ i ℞.
Saffron,	℥ ℞.
Quick-silver,	℔ j.
Turpentine, and	
Liquid Storax, an.	℥ iij.

When you have mix'd the Powders immediately after put in the Quick-silver, having well united it in a great brazen Mortar with the Turpentine and Storax, and mix the whole exactly together.

The Opinions of Authors are very various, as well concerning the quantities of the Ingredients, as the preparation of the Plaster. But I suppose this prescription and preparation will give satisfaction, without farther insisting upon the bad proceeding of the Ancients.

Some of our Moderns prescribe, that the Mercury should be dissolv'd in *Aqua Fortis*; and that the moisture of it should be evaporated with some part of the Vipers Grease, and Oyl of Lillies. But that cannot be done, but that the Mercury would retain the most part of the sharp and corroding parts of the *Aqua Fortis*, which would then come to be mix'd in the Plaster; which makes me believe, that there is no Rational Apothecary will practise that, since the Quicksilver may be perfectly united with the mass of the Plaster, according to my method. This

This Plaister is successfully us'd to allwage the pains of the Shoulders, Arms, Thighs, Legs, and all the parts of the Body, that proceed from any Venereal Venom: For by fortifying the parts, it draws the venom outwards, by turning it into a kind of sweat, and raising an easie flux. It also dissolves Nodes, and venereal Tumours that happen upon any part of the body: It is also laid to Wolfs, and other cold Tumours, either alone, or mix'd with other Plaisters, tending to the same effect.

Emplastrum Stipticum.

<i>R. Mimi,</i>	
<i>Lithargyri Auri, &</i>	
<i>Argenti, &</i>	
<i>Lapis Calaminaris, an.</i>	℥b β.
<i>Olei Lini, &</i>	
<i>Olivarum, an.</i>	℥b i β.
<i>Laurini,</i>	℥b j.
<i>Decocti Aristolochie,</i>	
<i>Longa & rotunda,</i>	℥b iij.

A Stiptic Plaister.

<i>R. Minium,</i>	
<i>Litharge of Gold, and</i>	
<i>Silver, and</i>	
<i>Lapis Calaminaris, an.</i>	℥b β.
<i>Linseed-Oyl, and</i>	
<i>Oyl of Olives, an.</i>	℥b i β.
<i>Oyl of Laurel,</i>	℥b j.
<i>Decoction of Birthwort,</i>	
<i>Long and round,</i>	℥b iij.

Incorporate the Litharges, Minium, and Lapis Calaminaris, with the Oyls, cold, in the first place, and then with the Decoction in a Plaister-pan, and boil them together over a moderate fire, stirring them continually to the ordinary consistence of Emplaisters.

Deinde adde,

<i>Cera Flava, &</i>	
<i>Colophonia, an.</i>	℥b j.
<i>Terebinthina, &</i>	
<i>Sandaraca, an.</i>	℥b β.
<i>Opoponacis,</i>	
<i>Sagapeni,</i>	
<i>Galbani,</i>	
<i>Ammoniacy,</i>	
<i>Bdellii, an.</i>	℥ iij.
<i>Succini,</i>	
<i>Olibani,</i>	
<i>Myrrha,</i>	
<i>Aloes,</i>	
<i>Aristolochia, longa & rotunda, an.</i>	℥ i β.
<i>Momia Transmarina,</i>	
<i>Magnetis,</i>	
<i>Hemauitis,</i>	
<i>Coralli, albi & rubri,</i>	
<i>Matris Perlarum,</i>	
<i>Sanguinis Draconis,</i>	
<i>Terra sigillata,</i>	
<i>Vitrioli Albi, an.</i>	℥ j.
<i>Florum Antimonii, &</i>	
<i>Croci Martis, an.</i>	℥ β.
<i>Camphora,</i>	℥ j.

Afterwards add;

<i>Yellow Wax, and</i>	
<i>Colophony, an.</i>	℥b j.
<i>Turpentine, and</i>	
<i>Sandarach, an.</i>	℥b β.
<i>Opoponax,</i>	
<i>Sagapen,</i>	
<i>Galbanum,</i>	
<i>Ammoniac,</i>	
<i>Bdellium, an.</i>	℥ iij.
<i>Amber,</i>	
<i>Olibanum,</i>	
<i>Myrrh,</i>	
<i>Aloes,</i>	
<i>Birthwort, long and round, an.</i>	℥ i β.
<i>Beyond-Sea Mummy,</i>	
<i>Magnet,</i>	
<i>Blood-stone,</i>	
<i>Coral, white and red,</i>	
<i>Mother of Pearls,</i>	
<i>Dragons blood,</i>	
<i>Seal'd Earth,</i>	
<i>White-Vitriol, an.</i>	℥ j.
<i>Flowers of Antimony,</i>	
<i>Crocus Martis, an.</i>	℥ β.
<i>Camphire,</i>	℥ j.

First melt the Wax and Colophony; then taking the Pan from off the fire, add the Opoponax, Sagapen, Galbanum, Ammoniac, and Bdellium dissolv'd in Vinegar, strain'd and thick'n'd, and incorporated with the Turpentine; and the whole being half cold, mix first the fine Powders of Birthwort, Mummy, Magnet, Blood-stone, Corals, Mother of Pearl, Seal'd Earth, Vitriol, and Crocus Martis; and lastly, those of the Sandarach, Amber, Olibanum, Myrrh, Aloes, Dragons blood, and Camphire, and incorporate the whole exactly.

This Plaister is recommended for the cure of all sorts of Ulcers, in whatsoever part of the body; for it cleanses, dries, and quickly consolidates them, preserving them

from putrefaction, and hindring all excreſcence of ill fleſh. It is proper to heal cuts and contuſions of the Nerves: It draws bits of Iron, Wood, Lead, or any other ſuch kind of ſubſtances, out of wounds: It is good againſt the bitings and ſtingings of all ſorts of venomous Animals: It ripens all ſorts of Apoſtemes; cleanſes and heals all ſorts of Ulcers, as well old as new; diſſolves and heals the ſwellings of the Kings-Evil, aſſwages the pains of wounds and bruises, and keeps for ſeveral years, being well prepar'd.

**Emplaſtrum ad Pedis Equini
Punctionem.**

Rx. *Cera Citrina,* ʒ viij.
Picis Alba,
Gummi Elemmi,
Terebinthina Veneta, an. ʒ iiij.
Cinabaris vulgaris ſubtiliſſimi pulverata,
Sanguinis Draconis,
Ariſtolochia, longe & rotunda, an. ʒ β.

**A Plaſter to cure the pricking of a
Horfes Foot.**

Rx. Yellow Wax, ʒ viij.
White Pitch,
Gum-Elemmi,
Venice-Turpentine, an. ʒ iiij.
Vulgar Cinabar very finely pulveriz'd,
Dragons blood,
Birthwort, long and round, an. ʒ β.

After you have bruiz'd the Birthwort-roots in a Marble-Mortar, and pulveriz'd the Dragons blood and Cinabar apart, melt the yellow Wax over a ſoft fire, with the white Pitch, Elemmi, and Turpentine; ſtrain them through a Cloth, and when the Ingredients are half cold, incorporate the Dragons blood and Cinabar, and unite the whole well together.

This Plaſter is a certain cure for the pricking of Horſes Feet newly made in Shooing, pouring a little of the Plaſter melted into the hole; for then you may Shooe the Horſe again, without any fear of any Apoſtome or Ulcer.

Emplaſtrum Veficatorium.

Rx. *Cantharidum ſine alis & capitibus pulve-
ratarum,* ʒ β.
Picis Alba, &
Terebinthina, an. ʒ ij.
Myrrha, &
Maſtiche ſubtiliter pulveratarum, an. ʒ β.

A Veficatory Plaſter.

Rx. Cantharides without wings or heads
powder'd, ʒ β.
White Pitch, and
Turpentine, an. ʒ ij.
Myrrh, and
Maſtich very finely pulveriz'd, an. ʒ β.

Beat the Cantharides apart, as alſo the Myrrh, and the Maſtich, and having mix'd the Powders, gently melt the Wax, white Pitch, and Turpentine; and when the ſubſtances are half cold, incorporate the Powders very well.

This Plaſter is call'd the Veficatory, or Blister-Plaſter, becauſe that being laid upon any part of the body, it raiſes the ſkin, and makes Bladders full of ſeroſity. It works in two or three hours, or ſooner, according to the hardneſs or ſoftneſs of the Skin: Then open the Bladders, and anoint the part with freſh Butter, to keep the Pores open, to let out the ſeroſities which the Plaſter has drawn together.

This Plaſter is not only us'd in Lethargies, Apoplexies, and other diſeaſes of the Brain, being apply'd to the Shoulders, or brawny parts of the Legs and Arms, and to the futures of the Brain; but it is us'd alſo in diſtempers of the Eyes and Teeth, apply'd behind the Ears.

You may alſo make a very effectual Blister-Plaſter, by incorporating the Powder of Cantharides with Crums of Bread moiſten'd in Vinegar, and ſpreading this mixture upon Leather. But this Plaſter is not to be us'd but upon occaſion; for being kept, it grows as hard as a ſtone, and the Cantharides loſe their vertue.

Emplaſtrum Cera cum Cymino.

Rx. *Cera Flava,*
Refina, &
Olei Roſæ, an.

lb ij.
ʒ v.

A Plaſter of Wax with Cumin.

Rx. Yellow Wax, lb ij.
Roſin, and
Oyl of Roſes, an. ʒ v.
Terebinthina

<i>Terebinthina Veneta,</i>		Venice-Turpentine,	
<i>Pulveris Cumini, &</i>		Powder of Cumin, and	
<i>Boli Armena, an.</i>	℥ iij.	Bole-Armenian, an.	℥ iij.
<i>Florum Camomilla,</i>		Flowers of Camomile,	
<i>Meliloti, &</i>		Melilot, and	
<i>Rosarum Rubrarum,</i>		Red Roses,	
<i>Myrtillorum, &</i>		Whortle-berries, and	
<i>Sanguinis Draconis, an.</i>	℥ j.	Dragons blood, an.	℥ j.

Having beaten together in a large Brass-Mortar the Cumin-seed, Whortle-berries, Roses, Camomile, and Melilot, and the Bole-Armenian, and the Dragons blood apart, and pass'd the whole through a Silk-sieve, melt the Wax and Rosin over a soft fire, among the Oyl of Roses; then add the Turpentine, and let the Ingredients cool; and when the Composition is half cold, mix the Powders, and incorporate the whole exactly.

Though this Plaister be not much in use, yet are the vertues of it ne're the less: For it is very proper to dissipate Contusions, and Flegmatic Tumours: It allwages the pains of the Sides, and Sciatic Gouts: It strengthens the parts in Fractures and Dislocations of the Bones, and draws forth the serosities through the Pores. It is also very proper to allwage the pains of the Liver, Spleen and Stomach, from whence it expels Wind, and dissolves Noxious Substances.

Emplastrum de Alabaastro.

The Alabaster Plaister.

<i>R. Massa Emplastri de</i>		<i>R. Of the Mass of Plaister of</i>	
<i>Cerussa, &</i>		White-lead, and	
<i>Cera Alba, an.</i>	℥ viij.	Yellow Wax, an.	℥ viij.
<i>Alabastri preparati,</i>	℥ ij.	Alabaster prepar'd,	℥ ij.
<i>Succini preparati,</i>		Amber prepar'd,	
<i>Sanguinis Draconis,</i>		Dragons blood,	
<i>Coralli Rubri,</i>		Red Coral,	
<i>Cranii Humani, &</i>		Man's Scull, and	
<i>Cornu Cervi ustorum, an.</i>	℥ j.	Burnt Harts-horn, an.	℥ j.
<i>Terebinthina, &</i>		Turpentine, and	
<i>Stryacis Liquide, an.</i>	℥ i β.	Liquid Storax, an.	℥ i β.

Having calcin'd the Man's Scull and Harts-horn, grind them together upon Porphyry, with red Coral and Alabaster; bruise the Amber a-part, and the Dragons blood; and after that, having melted the Plaister of Ceruse with the white Wax, and having added thereto the Turpentine and Liquid Storax, mix the Powders, and incorporate them well together.

This Emplaster is very much recommended against Abortion of Great-belly'd Women, whence it may be call'd, *Emplastrum ad fatum retinendum*. For it strengthens the Ligaments of the Matrix, and the parts to which they are fix'd. This Plaister is to be spread so that it may cover the Loyns, and the Os Sacrum, and may be worn and renew'd as often as need requires.

You may also lay another Plaister upon the Navel.

Emplastrum de Sperma-Ceti.

Plaister of Sperma-Ceti.

<i>R. Cera Alba,</i>	℥ viij.	<i>R. White Wax,</i>	℥ viij.
<i>Spermatis Ceti,</i>	℥ iij.	Sperma-Ceti,	℥ iij.
<i>Gummi Ammoniaci in aceto soluti, trajecti</i>		Gum-Ammoniac dissolv'd in Vinegar,	
<i>& spissati,</i>	℥ ij.	strain'd and thicken'd, &	℥ ij.

Having dissolv'd the Gum-Ammoniac in Vinegar, strain'd and thicken'd it, melt the white Wax in a Silver Spoon by the heat of a *Balneum Mariae*, between luke-warm and boiling-hot; after that, having added and melted the Sperma-Ceti, and mix'd it with the Gum-Ammoniac, the Plaister is made. You may, in respect to the nicer sort of Ladies, leave out the Gum-Ammoniac, because of the ill scent, and instead thereof put

put in an Ounce of the prest Oyl of the cold Seeds, which will be much to the same effect.

This Plaister is chiefly for the conveniency of Women newly brought to Bed, that cannot give their Children Suck: For being apply'd to the Breasts, for some time it carries away the Milk, asswages the pains that are caus'd by it, and dissolves the curdlings and hardnesses thereof, as well as those which proceed from the Kings-Evil.

Emplastrum ad Fontinellas.

R. Olei Rosati, &
Aque Rosarum, an. lb ij.
Ceruse Veneta, &
Lithargyri Auri preparati, an. ʒ viij.
Coquantur ex arte in Emplastrum:
Deinde adde,
Cera Alba, ʒ vj.

A Plaister for Issues.

R. Oyl of Roses, and
Rose-water, an. lb ij.
Venetian Ceruse, and
Litharge of Gold prepar'd, an. ʒ viij.
Boil them to the thickness of an Empla-
ster: Then add,
White Wax, ʒ vj.

Melt the white Wax cut into pieces, and incorporate it exactly with the rest.

This Plaister has no ill smell, and does not stick very close: One Sparadrap, or Plaister, will serve several days, being wip'd Morning and Evening, and laid on again. It may be put also to the same uses as Plaister of Ceruse.

Emplastrum ad Ganglia.

R. Radicum & Foliorum recentium Bar-
dana,
Cicuta,
Levisfici,
Angelica,
Cucumeris Agrestis,
Scrofularia,
Filipendula,
Illecebra,
Gratiola, &
Chelidoni major. an. ʒ i β.
Purgata & confusa omnia in
Succorum Cicuta, &
Chelidoni majoris, an. lb ij β.
Lento igne coquantur ad dimidia partis con-
sumptionem, deinde colentur & exprimantur.
Expressio vero cum

Oleo Lumbricorum, lb iiij.
Lithargyri auri lb ij. ex arte coquantur, as-
sidue movendo spatula lignea ad Emplastri spis-
situdinem.

In illis deinde liquefiant,
Cera Citrina, &
Picis Alba, an. lb j.
Terebinthina, &
Styracis Liquida, an. lb β.

Ab igne remotis permisce
Galbani,
Ammoniacy,
Bdellii,
Opoponacy, &

A Plaister against all sorts of Tumours.

R. Fresh-gather'd roots and leaves of Bur-
dock,
Hemlock,
Lovage,
Angelica,
Wild Cucumber,
Figwort,
Dropwort,
Wall-pepper,
Hedg-Hysop, and
Bigger Celandine, an. ʒ i β.
Having cleans'd and bruis'd them all, in
Juices of Hemlock, and
Bigger Celandine, an. lb ij β.
Boil them over a gentle fire, to the con-
sumption of the third part; then strain and
press them out. Then boil the Expression
with

Oyl of Worms, lb iiij.
Litharge of Gold lb ij. incorporated cold
with the Oyl of Worms, stirring them con-
tinually with a wood'n Spatula, to the con-
sistence of an Emplaster.

Then melt therein,
Yellow Wax, and
White Pitch, an. lb j.
Turpentine, and
Liquid Storax, lb β.

When they are off the fire, mix
Galbanum,
Ammoniac,
Bdellium,
Opoponax, and

Sagapeni

Sagapeni in aceto dissolut. traject. spissatorum & portione Emplastri seorsum prius exceptorum, an.

3 ij.

Deinde

R. Radicum Ireos Florentia,
Sigilli Beata Maria,
Cyclanini,
Corona Imperialis, &
Serpentaria,
Seminum Angelica,
Peonia Maris,
Nasturtii,
Euphorbii,
Olibani,
Mastiches,
Tacamahacca odorata, &
Sulphuris vivi, an.
Camphora,

3 i β.

3 β.

Sagapen dissolv'd in Vinegar, strain'd and thick'nd, and incorporated with the Turpentine and Liquid Storax a-part, as before, an.

3 ij.

Then

R. Roots of Florence-Orrice,
Wild Ellebore,
Sow-bread,
Crown-Imperial, and
Dragon-wort,
Seeds of Angelica,
Male-Piony,
Cresses,
Euphorbium,
Olibanum,
Mastich,
Sweet Tacamahacca, and
Quicksilver, an.
Camphire,

3 i β.

3 β.

Mix the Roots and Seeds finely powder'd first, and presently after the Quicksilver, Gums, and Camphire powder'd a-part; and in this order incorporate the Drugs exactly together, and the Plaister is made.

The vertues of this Plaister are to digest and dissolve all sorts of unnatural substances, especially those which are cold, and hard to be dissolv'd, gather'd together under the skin in the external parts of the body, such as are Wolfs, the Kings-Evil, Nodes, and Ulcerous Callosities: For which purposes there is hardly to be found a Plaister of greater efficacy then this; as also for all sorts of Tumours and Substances gather'd together in the external parts, from what cause soever proceeding.

Emplastrum aliud ad Ganglia.

R. Gummi Ammoniaci,
Galbani,
Opoponacis, &
Sagapeni in aceto solutorum, colatorum &
spissatorum, & Myrrha electa subtiliter
pulverata, an.
Olei Laurini, &
Spiritus Vini, an.
Sulphuris Vivi,
Salis Ammoniaci, &
Vitrioli Romani, an.
Euphorbii,

3 iij.

3 j.

3 β.

3 ij.

Another Plaister for the same.

R. Gum-Ammoniac,
Galbanum,
Opoponax,
Sagapen dissolv'd in Vinegar, strain'd
and thick'nd, and choice Myrrh very
finely pulveriz'd, an.
Oyl of Laurel, and
Spirit of Wine, an.
Quick-silver,
Salt-Ammoniac, and
Roman Vitriol, an.
Euphorbium,

3 iij.

3 j.

3 β.

3 ij.

After you have dissolv'd, strain'd and thick'nd the Gums to the consistence of an Emplaster, and taken them from the fire, add to them the Oyl of Laurel, and Spirit of Wine, and after that the Myrrh, Quick-silver, Salt-Ammoniac, Roman Vitriol, and Euphorbium finely pulveriz'd, and incorporate them all exactly.

Though this Plaister consists of less Ingredients then the former, yet the vertue is no less to produce the same effects.

I might here insert several other preparations of Emplastres, did I not believe I had produc'd enough, as well for the full instruction of young Beginners, as to give satisfaction in reference to all those purposes for which Emplastres were provided.

CHAP. VII.

Of Cataplasmes.

THough it be not the Custom to make any provision of Cataplasms in Shops, and that they are only prepar'd when need requires, by reason of their superfluous moisture which soon corrupts them; yet the necessity which there is of them sometimes, has oblig'd me to afford them a Chapter.

The name of *Cataplasma* is given to an External Medicament, in consistence not unlike that of *Cerats*; receiving into its Composition divers Liquors and different parts of Plants, Animals, and Minerals, some liquid, others drye, and many times Oyles, Oynments, and other both external and internal Compositions; according to the difference of the Infirmities and purposes, for which this sort of Medicine is prepar'd. The principal Office of Cataplasms is to appease pains, to soften, dissolve, discuss, cause transpiration, and suppurate matters gather'd together in the external parts of the body.

The most common Cataplasma, and most in use to assuage pains, dissolve and dissipate Tumours newly come, especially Flegmatic, is this that follows:

<i>R. Mica panis Albi recentis,</i>	\mathfrak{z} iij.	<i>R. Crum of new White-bread,</i>	\mathfrak{z} iij.
<i>Lactis recentis multũ,</i>	lb j.	<i>Milk new from the Cow,</i>	lb j.

Fry them over a gentle Fire in a small Frying-pan, stirring them often with a Wood'n-Spatula till they are as thick as a Poultice; then taking them off the Fire,

Adde		Add	
<i>Vitellus Ovorum,</i>	Nº iij.	<i>Yolks of Eggs,</i>	Nº iij.
<i>Olei Rosati,</i>	\mathfrak{z} j.	<i>Oyls of Roses,</i>	\mathfrak{z} j.
<i>Croci subtiliter pulverat.</i>	\mathfrak{z} j.	<i>Saffron finely beaten,</i>	\mathfrak{z} j.

Mix the Yolks of Eggs, the Oyl of Roses, and the Saffron with the Poultice, and the Cataplasma is made.

<i>Si major dolorum sedatio requiratur,</i>		<i>If a more powerful assuagement of pain</i>	
<i>Extract. Liquidioris Opii, 3 ij. permisce-</i>		<i>be desir'd, mix therewith</i>	
<i>antur.</i>		<i>Liquid Extract of Opium,</i>	3 ij.

You may also prepare a Cataplasma to soften and bring to suppuration such matters as are dispos'd thereto, proceeding this way.

<i>R. Radicum Liliorum, &</i>		<i>R. Roots of Lillies, and</i>	
<i>Althea minutim incisurum, an.</i>	\mathfrak{z} iij.	<i>Marsh-Mallows, cut very small, an.</i>	\mathfrak{z} iij.
<i>Foliorum Malva,</i>		<i>Leaves of Mallows,</i>	
<i>Althea,</i>		<i>Marsh-Mallows,</i>	
<i>Senecionis,</i>		<i>Groundsell,</i>	
<i>Violaria,</i>		<i>March-Violets,</i>	
<i>Parietaria,</i>		<i>Pellitory,</i>	
<i>Branca Ursina, an.</i>	M. j.	<i>Brank-Ursin, an.</i>	M. j.

Boil the Roots first in six Pints of Fountain-Water; sometime after put in the Leaves, and continue boiling them, till they are perfectly tender. Strain the Decoction, and beat the settlement in a Marble-mortar with a Wood'n-Pestle, and pass the Pulp through a Hair-sieve reverst.

<i>Colaturam & Pulsem secretam, cum</i>		<i>The Straining and Pulp put into a small</i>	
<i>Farina Lini, &</i>		<i>Frying-pan, with</i>	
<i>Fenugraci, &</i>		<i>Meal of Linseed, and</i>	
		<i>Fengreek, and</i>	<i>Olei</i>

Olei Liliorum, an. ℥ iij.
Coque igne lento, sepius agitando ad debitam
spissitudinem.

Oyl of Lillies, an. ℥ iij.
 Boil them all together over a gentle fire,
 stirring them often, to a due consistence.

You may also prepare a Cataplasim proper to cut, digest, dissolve, discuss, and cause transpiration, according to the following Receipt.

R. Radicum Cyclaminis,
Brionia,
Cucumeris silvestris, an.
Foliorum Absinthii,
Mercurialis, an.
Florum Camomilla, &
Meliloti, an.

℥ ij.

M. ij.

M. j.

R. Roots of Sow-bread,
Briony,
Wild Cucumbers, an.
Leaves of Wormwood,
Herb Mercury, an.
Flowers of Camomile, and
Melilot, an.

℥ j.

M. ij.

M. j.

Boil the Roots first, then the Leaves in four Pints of common Water, adding at length two Pints of White-wine, till they are sufficiently soft. Strain them, and pass the sediment beaten through a Hair-sieve. To the Decoction and Poultice add

Farina Fenugraci, &
Lupinorum,
Pulveris Absinthii,
Cumini,
Feniculi, &
Baccarum Lauri, an.

℥ j.

Meal of Fenugreek,
Lupines,
Powder of Wormwood,
Cumin,
Fennel, and
Laurel-berries, an.

℥ j.

Fiat Cataplasma.

Mix them into a Cataplasim.

The Preparation of this Cataplasim being like the former, I have not been particular in it. And I believe these three Preparations to be sufficient for further instruction.

C H A P. VIII.

Of Fomentations, Baths, and Half-Baths.

THE Distemperatures which happen not only to the parts, but also to the whole habit of the body, and the troublesome pains that Wind, Defluxions, Fermentations, Worms, the Stone, Contusions, Fractures, Dislocations, and many other accidents cause to several parts of the body, have begot the use of Fomentations, Baths, and Half-Baths, which are external liquid Remedies, sometimes plain, sometimes compos'd of several Medicaments.

The name of Local-Baths is giv'n to Fomentations, because they are generally apply'd to the part affected; and work the same effects upon one, as Baths and half-Baths might do upon several parts at a time. And though Baths and half-Baths are often us'd for the ease and cure of Distempers that fall upon single parts of the Body, yet the good effects of Fomentations, their easiness, and the little trouble there is in them, are the reasons that they are more frequently made use of then Baths or half-Baths, which require more room, bigger Vessels and more trouble. For which cause they are never us'd, but where Fomentations have not succeeded, or where the excess and nature of the Disease require more effectual Remedies then Fomentations.

There may be prepar'd as many sorts of Fomentations as there are diversity of Distempers. The Roots, Leaves, Flowers and Seeds of most Plants, boyl'd in Water, or in other proper Liquors are the usual foundation, and substance of Fomentations. Certain Minerals and parts of Plants, particularly Salts and Greases, not to mention Oyls that may be mix'd with them, are frequently added, and oft-times make a part of the Liquor necessary for the Fomentation.

I shall only give two or three examples which may suffice for the preparation of all others that may be prescrib'd.

Fotus Antipleuriticus.

R. Radicum Altheæ, & Liliorum, an.	℥ iiij.
Foliorum Malvæ, Altheæ, Violaria, Senecionis, Branca Ursina, an.	M ij.
Florum Camomilla, Meliloti, an.	M j.
Semen integrorum Lini, & Fenugraci, an.	℥ j.

A Fomentation against the Pleurisie.

R. Roots of Marsh-Mallows, Lillies, an.	℥ iiij.
Leaves of Mallows, Marsh-Mallows, March-Violets, Ground-sell, Brankursin, an.	M ij.
Flowers of Camomile, and Melilot, an.	M j.
Whole Seeds of Line, and Fengreek, an.	℥ j.

After you have well cut, and mix'd the Roots and Leaves with the Flowers and Seeds, and put them into two Bags of fine Linnen, both of an equal bigness, and large enough to cover the part affected, and quilted them both, boyl them in ten pints of Common-water till the Substances are very tender; then take off the Decoction from the Fire, and when it is half cold, take out the two Bags, and pressing them between your hands, to drain out the Water, apply one Bag warm to the pain, and cover it with a double Napkin; and when it has lain a quarter of an hour apply the other in its place, and do thus from quarter to quarter of an hour as often as there is occasion.

After you have so done, wipe the part and anoint it with Oyl of Lillies, or Ointment of Althæa, laying a Linnen-cloth upon it, and covering it with a double Napkin well-warm'd. You may also repeat the same applications as often as need requires.

Fotus Antinephriticus.

R. Radicum Raphani Hortensis, Foliorum Nasturtii Aquatici, Becabunga, Berula, Parietaria, & Violaria, an.	M ij.
Axungia Viperina, Semen Lini, & Fenugraci, an.	℥ ij.

An Anti-Nephritic Fomentation.

R. Roots of Garden-Radishes, Leaves of Water-Cresses, Brooklime, Water-Pimpernel, Pellitory, March-Violets, an.	M ij.
Vipers Fat, Linfeed, and Seed of Fengreek,	℥ ij.

Having cut the Roots and Herbs, and mix'd them with the Seeds, put them into two Bags, and proceed in every thing else as before. Otherwise you may dip Sponges or Wool in the Decoction, and apply it to the part affected.

Fotus Stomachicus.

R. Radicum comensarum Cyperi, Tormemilla, Bisforta, an.	℥ ij.
Foliorum Absinthii Majoris, Scordii, Menta, & Costi Hortensium, Calamita, Origani, &	

A Fomentation for the Stomach.

R. Bruis'd Roots of Cyperus, Tormentil, Snakeweed, an.	℥ ij.
Leaves of bigger-Wormwood, Garden-Germander, Garden-Mint, Garden-Costus, Calamint, Organie,	

Marjorana,

<i>Marjoran, an.</i>	<i>Mij.</i>	<i>Marjoram, an.</i>	<i>Mij.</i>
<i>Nucum Cupressi,</i>		<i>Cypress Nuts,</i>	
<i>Tartari Rubri,</i>		<i>Red-Tartar,</i>	
<i>Balaustiarum, &</i>		<i>Pomgranate-flowers,</i>	
<i>Rosarum Rubrarum, an.</i>	<i>ʒjß.</i>	<i>Red-Roses, an.</i>	<i>ʒjß.</i>

Mix them all together and put them into Baggs, and boyl them over a gentle fire in six pints of Chaly-beate water, to the consumption of the third part, adding toward the latter end three pints of sowre Red-wine, to preserve the Spirits, and keep it cover'd to hinder the dissipation of the Aromatical parts of the Plants.

Whole Baths and half Baths have been made use of time out of mind; and they differ in this, that whole Baths are for all the body except the head; and are more for pleasure then for the cure of Diseases; whereas half Baths are but for half the body and only those parts which are below the Stomach, and are rather for cure then pleasure.

Generally plain River-water is made use of luke-warm for Baths of pleasure; with an addition to smoothe the skin, sometimes of Milk, sometimes of Oily-fruits made into Pastes, or else of sweet smelling flowers. But to add vertue to Baths or half Baths, decoctions proper for particular distempers must be prescrib'd, which are many times the same Ingredients us'd in Fomentations. But then the quantity of Ingredients must be proportion'd to the quantity of Water: And the Bath must be kept in a heat as near to natural as may be; so that the patient may endure it with pleasure. It is also necessary that the Patient should purge before hand; though purges may be successfully given in the Baths themselves. Nor is it good to stay in the Bath above one or two hours at a time, though you may go into it two or three times a-day, and also in the night time if there be occasion.

But because the Ladies oftner use these Remedies then Men, as well for their particular Distempers as to preserve the beauty of their skins, I will communicate to them one Bath of which I have known the good effects, as-well in smoothing the wrinkles and shrivelings of the skin, and the chaps of Womens Bellies and Breasts after lying in, as to beautifie and whiten the skin and continue its plumpness, and a sound disposition of body.

Put two pound of Rice well cleans'd and peel'd into an Earthen-pot varnish'd within, and of a good bigness, and having boyl'd them over a gentle fire in Milk, to the entire dissolution of the Rice, beat apart in a large wood'n-mortar with a wood'n-pestle four pound of Almonds blanch'd, two pound of the Cold-seeds, and a pound of white Poppy-feed, and reduce it into a Paste, hardly to be felt, to be mix'd with the Rice dissolved in the Milk.

Then heat as much River-water as is needful for the Bath, and dissolve in it half a pound of Rock-allum: then let the party go into the Bath with a pound and a half, and first rub those parts which have most need, and then the rest of the body, and when all the Paste is spent, let her stay there two hours or more: then change the water, and continue this Bath Morning and Evening for seven or eight days. Coming out of the Bath anoint the wrinkl'd parts with a Cerate made of Oyl of Eggs ʒij. White-wax four ounces, and as much Lead melted and well wash'd, and reduc'd into a Cerate by incorporation. I leave the Ladies to the Experience of this Bath, for I know not how to praise it enough.

CHAP. IX.

Of Evaporating Baths, and Dry Baths.

THE same Ingredients serve for Evaporating Baths, as for Baths, half-Baths, and Fomentations.

The principal ends of Evaporating Baths are to ease pain, soft'n, open, and attenuate, or to close and fortifie; by raising the Vapours, and causing them to ascend to the part affected.

The most frequent use of evaporating Baths are in Diseases of the Fundament and Matrix, and also for Infirmities of the Ears and Teeth. Generally the Patient is order'd to sit in a Chair with a hole bor'd in it, and clos'd round at the bottom. Sometimes Fun-

nels are made use of, especially for Diseases of the Matrix, as also for the Ears and Teeth. Care must be taken for to moderate the heat of these Baths, and to continue or renew them as occasion requires.

As for dry Baths call'd Stoves, they may be made use of for some particular part of the body, but their chief use is for the whole body. There is no other heat made use of for these, but that of Coals, Bricks, or some other heated Substances. Which are variously made use of, and in various Vessels, which every one may invent as their Genius prompts them. Onely care must be taken, that the Bath be proportionable to the Disease and the strength of the person that uses it. These Baths are very convenient for moist complexion'd persons, not only in Venereal Distempers, but also in Rhumatisms, universal or particular pains of the Members, as also in Palsies.

CHAP. X.

Of Epithemes.

E Epithemes are either liquid or solid: Liquid Epithemes may pass for Fomentations, only the difference is, that Epithemes are only to temper the extraordinary heat of the Liver, and to fortify the heart against the malignity of Diseases, and are only apply'd to one or other of the Bowels, whereas Fomentations are apply'd to all the parts of the body.

Slight Cordial and hepatic Decoctions, simple and compound distill'd Waters, Vinegar, juice of Citrons, Cordial and hepatic Powders, Confections of Alkermes and Jacinths, as also Treacle and Mithridate, are the ordinary matter of liquid Epithemes, of which I shall give two Examples, one for the Heart, the other for the Liver.

Rx. Aquarum Cardui Benedicti,

Buglossi,

Borraginis,

Rosarum, an.

℥ ij.

Aqua Theriacalis,

Succi Citri, an.

℥ ij.

Confectionis Alkermes,

℥ ij.

De Hyacintho,

℥ j.

Pulveris Diamargaritis frigidi,

℥ ij.

Rx. Waters of Carduus Benedictus,

Buglossi,

Borrage,

Roses, an.

℥ ij.

Treacle-water,

Juice of Citron, an.

℥ ij.

Confection of Alkermes,

℥ ij.

Of Jacinths,

℥ j.

Powder of cold Diamargarite,

℥ j.

Mix all together, and make an Epitheme, to dip Wollen-cloaths in, being lukewarm, to be apply'd to the Region of the Heart, alternately for an hour or two.

Rx. Aquarum Nymphae,

Portulaca,

Oxalidis, &

Solani, an.

℥ ij.

Aceti Rosati,

℥ j.

Pulveris Diarrhodon Abbatis, &

Diatria Santali, an.

℥ j.

Trochiscorum de Camphura,

℥ ss.

Rx. Waters of Water-Lillies,

Purslain,

Sorrel,

Night-shade, an.

℥ ij.

Vinegar of Roses,

℥ j.

Powder of Diarrhodon of the Abbot, and

Diatria Santalin, an.

℥ j.

Trochisks of Camphire,

℥ ss.

Make an Epitheme to be apply'd lukewarm to the Region of the Liver.

You may observe the manifest ease which the sick receive from these Applications in restless burning Fevers, and from thence judge of the advantage and benefit afforded by them.

Confections of Alkermes and Jacinths, Mithridate, Opiate of Salomon, Diafcardium, Conserve of Roses, Gillow-flowers, Bugloss, &c. and Powders of Diamargariton, Diarrhodon, Diatria Santali, &c. as also the Oyl of Scorpions of Matthiolum are the ordinary Ingredients of solid Epithemes, the use whereof is only for the Heart and Liver. They are laid on after the application of the liquid ones, and suffered to lye as long as they will hold on. The usual method of Prescription is this,

Conservatum

Rx. <i>Conservarum Tunicae, &</i>		Rx. Conserve of Clove-Gillow-flowers, and	
<i>Rosarum, an.</i>	3 ℔.	<i>Roses, an.</i>	3 ℔.
<i>Confectionis Alkermes, &</i>		<i>Confection of Alkermes, and</i>	
<i>De Hyacintho, an.</i>	3 ij.	<i>Jacinths, an.</i>	3 j.
<i>Theriaca probata, &</i>		<i>Approv'd Treacle, and</i>	
<i>Pulveris Diamargaritis frigidi, an.</i>	3 j.	<i>Powder of cold Diamargariton, an.</i>	3 j.

CHAP. XI.

Of Bags and Caps quilted with Powder.

THe inconvenience of wearing Plaisters long upon the Stomach, and especially in tedious Diseases; and the obstinate Diseases caus'd by the excess of the moisture or coldness of the brain, was the reason of the invention of quilted Caps and Stomachers: For which those Aromatic Powders already set down may serve as the examples of Receipts sufficient; I shall only add that these Powders need not be too finely beaten, to the end they may preserve their virtue the longer, and may not be subject to get through the Tassies of which the Caps and Stomachers are made.

CHAP. XII.

Of Perfumes.

Both the healthy as well as the Sick may equally receive benefit or mischief from good or bad smells. And though good smells are generally sought for, yet bad scents are not always to be rejected, as being necessary for the cure of some Distempers, that sweet smells are the cause of in some persons.

Take three drams of Florence-Orrice, three drams of Benjamin, one dram and a half of good Storax, a dram of Lignum Rhodium, half a dram of yellow-Saunders, half a scruple of Aromatick-Reed, as much Flowers of Benjamin and three Cloves, mix this Powder in six ounces of good Rose-water, and three ounces of Orange-Flower-water, and having kept them in the cold in a Matrafs for twenty four hours or more, pour out some part of the mixture into a Perfuming-Pan moderately heated, and keep the rest for use in the Matrafs, or else in a strong-glass close stopp'd. You may, if you please, add to this Composition some few grains of Musk and Amber-greese.

To make Pomanders or Bracelets, take eight ounces of Willow-coal, two ounces of Labdanum, two ounces of Mastick in tears, and two ounces of yellow-Amber, and having mix'd these Powders, incorporate them with Muscilage of Gum-tragacanth extracted with Rose-water: Then make up the Pomanders of what figure you please, and dry them in the shade. They that will be at the cost may add to these Pomanders odoriferous-Tacamahacca, as also Musk and Amber-greese.

These Pomanders are not only good to burn, but also to perfume the Caps and Linnen of those that having cold and moist Brains are subject to defluxions and Rhumatisms. They may also take the fume into their Mouths and up their Nostrils.

Women also that are troubl'd with the suppression of the Menstruums and Hysterick Passions may sit over the Smoak of these Pomanders.

It is also good for those that are troubl'd with Asthma's and thick and viscous Flegm, to receive the smoak of these Pomanders at the Mouth and Nostrils. But they are nought for those that are troubl'd with spitting of blood, and Ulcers of the Lungs.

Sometimes it is enough to burn Amber, Mastick, or Tacamahacca alone, or some other Gum of the same nature; or else Cephalic, pectoral or Hysterick Plants, according to the judgment of the Physician.

The Fume of Cinnaber is sometimes us'd to raise a Flux in Venereal Cures, especially when it cannot be done by friction, or other Preparations of Mercury.

But though Mastick, Olibanum, Benjamin, Labdanum, Calamus Aromaticus, or some other Aromatics are mix'd with it to hinder the bad Effects of the Cinnaber, I think

think the best Correction is to let it alone if possible. The fume of Cinnabar is us'd with less danger for the Cure of stubborn and Venereal Ulcers, so they be remote from the Head and Mouth.

CHAP. XIII.

Of Frontlets.

THE cruel Torments caus'd by pains in the Head occasion'd the invention of Frontlets; which serve in fortifying the brain, to discuss, suppress, and cause transpirations of the Vapours, qualifie their heat, and allwage their pricking Torture.

Frontlets are sometimes made of dry Ingredients, as Roses, Flowers of Elder, Water-Lillies, Sanders, Corianders bruised, Betony, Marjoram, or Lavender cut, Kernels of Peaches and Abricots.

Sometimes it suffices to bind to the Fore-head and Temples Linen that is dipp'd in Rose-water, Vinegar, or Elder-water. Sometimes the green Leaves of Water-Lillies, Gourds, Lettice, Purslain, and Vine-Leaves, &c. especially for those Distempers of the head that attend burning Fevers. But the most effectual Frontlets are made of Conerves of Flowers, Extracts, Seeds, Oyntments, Powders, and other proper matters made into a Paste, and spread upon fine Linen, to be laid to the Forehead and Temples.

Rx. <i>Conserve Rosarum Rubrarum,</i>	X	Rx. Conserve of Red-roses,	
<i>Nymphaea, an.</i>	3vj.	Water-Lillies, <i>an.</i>	3vj.
<i>Seminis Papaveris albi contusi,</i>		White-poppy seed bruised.	
<i>Pulveris Diatriæ Santalon, &</i>		Powder of Diatriæ Santalon,	
<i>Unguenti Populei, an.</i>	3j.	Popler Oyntment, <i>an.</i>	3j.

Make a Frontlet to be apply'd cold to the Forehead and Temples.

Rx. <i>Conserve Violarum,</i>		Rx. Conserve of Violets,	
<i>Rosarum, &</i>		Roses, and	
<i>Nymphaea, an.</i>	3℔.	Water-Lillies, <i>an.</i>	3℔.
<i>Pulveris trium Santalorum, &</i>		Powder of the three Sanders, and	
<i>Coriandri,</i>		Corianders,	
<i>Nucleorum Persicorum, contusorum, &</i>		Peach-kernels bruised, and	
<i>Extracti Liquidioris Opii, an.</i>	3j.	Liquid Extract of Opium, <i>an.</i>	3j.

Sometimes it is enough to apply to the Forehead and Temples equal parts of Oyntment of Populeum and extract of Liquid Opium: or to make a Frontlet of the Kernels of Peaches or Abricots bruised in a Mortar with about a sixth part of Bay-Salt, and as much Powder of Roses.

Frontlets to stop thin and sharp defluxions upon the Eyes, are made by incorporating equal parts of Bole-Armenian, Seal'd-Earth, Mastick and Dragons blood in Powder with whites of Eggs; then reduce it into a Paste and spread it upon Tow, to be apply'd to the Forehead and Temples.

CHAP. XIV.

Of Lotions.

Lotions are a sort of Remedies between Fomentations and Baths. Cooling and sleep-procuring Lotions are prepar'd in restless Fevers. To which purpose we boil in Water the Roots, Leaves, and Flowers of Water-Lillies, the Leaves of Lettice, Purslain, Willow and white Poppies, and the cold Seeds, to wash the hands and feet of the Patient from time to time.

Sometimes the head is to be wash'd with a clear Lye made of the Ashes of Vine-twigs, to cleanse off the greasiness of the hair. Sometimes Lotions are prepar'd for the

the cure of the Scurf. Among the rest that of the simple Decoction of Water-Cresses in common water; or that of the compound Decoction of the Roots of Orrice, Assarabacca, Leaves of Ivy, Wormwood, Fumitory, Celandine, Scabious, creeping Thyme and Marjoram, Laurel-berries and Lupins, boil'd together in a clear Lye of Juniper-wood. This Lotion is to be continued for several days in the wain of the Moon, after the use of general Purgers and Diaphoreticks. Sometimes to these Decoctions are added the Dungs of Pigeons, Geese, and Sheep; the Roots of Patience and Ellebore, Coloquintida, Euphorbium, Verdigreese, and several other penetrating Medicaments, whose gentler Remedies will not prevail.

There is a Lotion also to be made of the Decoction of Lupins, Staves-acre, Wormwood, and lesser Centaurie in Vinegar, to wash the head, and sometimes the whole body, to kill Lice and Vermine.

To make the Hair grow, and to keep it from falling off, the Decoction of the Maiden-hairs, and Female Southernwood is an excellent Lotion.

Several Lotions are made to cure the Itch, Tetters, Warts, and other Deformities of the Skin, not only of the Decoctions of the Roots and Leaves of Elecampane, Sowre-Dock, Scabious, Fumitory; but also of the Dissolutions of Mercury made in strong-water, or Spirit of Nitre, mix'd with a good quantity of ordinary water, to wash the hands, arms, legs, and feet, not coming near the head, nor any other part of the body which the Mercury may prejudice.

The head may also be wash'd with Spirit of Wine, or the Queen of Hungaries Water, to strengthen the Brain, dissipate the superfluous moistures thereof, and heal Contusions. It is good also to wash the other parts of the body with the same Liquors in Rhumatisms, and to appease pains of all sorts. It is good also for Burns, adding a little Vitriol, or some few Grains of Verdigreese.

Ulcers and Wounds are also to be wash'd with Tinctures or Decoctions of Birthwort, Gentian, Centaury, Periwinkle, Worm-wood, Gold'n-Rod, Sanicle, &c. in the juices of the same Plants or in White-wine; adding sometimes Powders of Myrrh, and Aloes; of which, when the Wounds are deep, Injections are to be made.

I omit the Imbrocations or Aspersions of the Ancients, as altogether out of use.

CHAP. VII.

Of Collyriums.

Collyriums are liquid Remedies appointed for Infirmities of the Eyes. Which name is particularly attributed to Trochisks of Ceruse of Rhafis, dissolv'd in specific Waters. Dry Powders also and Oyntments, us'd for the same Effect, are call'd by the same name: and improperly some liquid Remedies prepar'd for the cure of Venereal Ulcers.

There are many that boast themselves to have exquisite Receipts of this nature, and therefore I shall only give two or three Examples of such as I have had successful experience of.

<i>R. Magnesia Opalina subtilissimi pulvera-</i>	<i>R. Magnesia Opalina very finely pow-</i>
<i>ta, &</i>	<i>der'd, and</i>
<i>Tutia Alexandrina preparata, &</i>	<i>Tutia of Alexandria prepar'd,</i>
<i>Salis Saturni albisimi, an.</i>	<i>Whitest Salt of Saturn, an.</i>
<i>Aquarium stillatissimum,</i>	<i>Distill'd Waters of</i>
<i>Euphrasia,</i>	<i>Eybright,</i>
<i>Feniculi,</i>	<i>Fennel,</i>
<i>Rosarum, &</i>	<i>Roses,</i>
<i>Chelidoniis majoris, an.</i>	<i>Bigger Clandine, an.</i>
<i>3j.</i>	<i>3j.</i>

Mix them together and make a Collyrium. Heat this Collyrium luke-warm, and wash the Eyes as often as you think fit, to cure them of redness and inflammation, and to consume the Pin and Web.

R. Sacchari

<i>R. Sacchari Candi,</i>	3j.	<i>R. Sugar-Candy,</i>	3j.
<i>Radici Ileos Florentia,</i>	3 iij.	<i>Roots of Florence-Orrice,</i>	3 iij.
<i>Tutia Alexandrina preparata,</i>	3 ij.	<i>Tutia of Alexandria prepar'd,</i>	3 ij.
<i>Sarcocolla,</i>		<i>Sarcocol,</i>	
<i>Vitrioli Albi, &</i>		<i>White-Vitriol,</i>	
<i>Aloes Succotrina, an.</i>	3j.	<i>Aloes Succotrine, an.</i>	3j.
<i>Caryophyllorum,</i>	3j.	<i>Cloves,</i>	3j.
<i>Aquarum Stillatiarum,</i>		<i>Distill'd Waters of</i>	
<i>Euphrasia,</i>		<i>Eybright,</i>	
<i>Feniculi,</i>		<i>Fennel,</i>	
<i>Rosarum, an.</i>	3 viij.	<i>Roses, an.</i>	3 viij.
<i>Vini Hispanici,</i>	lb ij.	<i>Spanish-Wine,</i>	lb ij.

Having pulveriz'd the Ingredients, and mix'd them with the Waters and Spanish-wine, put them into a Glas-bottle close-stopp'd, and expose them to the Sun for 15 days, stirring them very often; or else set them in a moderate sand-Bath as long, and keep the pure Liquor in a bottle close-stopt.

That which follows is a Powder which may be call'd a dry Collyrium, very proper to consume the serosities of the Eyes, and the Pin and Web, provided they be not under the tunicles of the Eyes.

<i>R. Sacchari Candi,</i>	3 ij.	<i>R. Sugar-Candy,</i>	3 ij.
<i>Tutia preparata, &</i>		<i>Tutia prepar'd, and</i>	
<i>Stercoris Lacerta, an.</i>	3j.	<i>Lizards-Dung, an.</i>	3 ij.
<i>Vitrioli albi usti,</i>		<i>White-Vitriol burnt,</i>	
<i>Aloes Succotrina, &</i>		<i>Aloes Succotrine,</i>	
<i>Salis Saturni, an.</i>	3 lb.	<i>Salt of Saturn,</i>	3 lb.

Pulverize and mix them all together for a dry Collyrium.

Blow the weight of two or three grains at a time into the Eye. It may be also mingl'd with Ophthalmic Waters for a liquid Collyrium.

Laufrancus uses this Collyrium for the cure of Venereal Ulcers.

<i>R. Vini Albi,</i>	lb j.	<i>R. White-wine,</i>	lb j.
<i>Aquarum Plantaginis, &</i>		<i>Waters of Plantain, and</i>	
<i>Rosarum, an.</i>	3 iij.	<i>Roses, an.</i>	3 iij.
<i>Auripigmenti,</i>	3 ij.	<i>Orpine,</i>	3 ij.
<i>Viridis Eris,</i>	3j.	<i>Verdigreese,</i>	3j.
<i>Myrrha</i>		<i>Myrrh,</i>	
<i>Aloes, an.</i>	3 ij.	<i>Aloes, an.</i>	3 ij.

Mix them for use.

You must be careful in preparing this Collyrium to powder the Orpiment, Verdigrisee, Myrrh and Aloes, very finely before you mix them with the Liquors. You may also dulcifie the Collyrium with three or four times the weight of Rose-water, Plantain-water, or Night-shade-water, when it is to be us'd, especially in injections, for Gonorrhea's when the venome is over; only take care that the Spermatic Vessels be neither ulcerated nor over-weaken'd.

I pass over in silence several other External Remedies little in use; believing it to be now high time to make an end of these Galenic Preparations, and that I have not forgot any thing which to the best of my Judgment deserv'd to be taken notice of, or which I may not have occasion to speak of in the next Part.

THE THIRD PART
OF THE
Royal Pharmacopœa,
CONTAINING
CHYMICAL PREPARATIONS.

The Order and Method of the Third Part.

THE great correspondence between the one and the other Pharmacy, and the mutual helps which they daily afford each other, oblig'd me to set down at the beginning of this Work such general observations as might contribute to the understanding of both; and therefore I will only lightly and occasionally touch upon what I believe I have already explain'd: Only give me leave to make application, and declare the use of the whole, while I speak of Chymical Preparations in particular.

Chymical as well as Galenick Pharmacy acknowledges Vegetables, Animals, and Minerals, for the matter upon which all its operations are to be grounded, and of which she prepares Remedies proper for the ease and cure of Diseases. But whereas the Galenick Pharmacy separates those parts which it believes hurtful or unprofitable by ordinary means; and is contented to cleanse, wash, infuse, boil, stamp, or mingle, according to occasion, those parts which it judges to be the best; Chymistry pierces farther into the bowels of mixt bodies, artificially to separate all the parts which compose them; and thus displaying the pure substances, puts them into a condition to produce with efficacy all that can be expected from them.

This hinders not however, but that in this concord of matter and end, which is found to be between both the one and the other Pharmacy, Chymistry, as much exalted as it is, makes use of the same Instruments and Vessels which the Galenick employs, though it makes use of a great many more; while the industrious discover new ones every day, when they design to make a separation of mixt bodies to the height of exactness.

I have divided this Third Part into Three Books: In the First, I treat of the Preparation of Vegetals, which are the first mixt bodies that seem to present themselves first to the eyes, upon the superficies of the Earth, which are familiar to us, and from which we draw abundance of Remedies. I make Animals the subject of the Second, not only because that being for the most part nourish'd by Vegetals, their different parts seem in some measure to partake of their vertues, and to impart them to a great number of Remedies wherein they are us'd; but because we feed upon several of them our selves. I have

reserv'd Minerals for the subject of the Last Book; because that being as it were all hid in the bowels of the Earth, they are not so familiar to us, and require more labour, and a more vehement fire, and much more skill than Vegetals or Animals.

But because my main end is to shew the most sure and easie ways to accomplish all Chymical Operations, I will sincerely communicate those which I practise every day; and displaying without any reservation Preparations fit to be known, I shall endeavour to explain my self in such sort, that apprehending those which I shall give, it may be no difficult thing to perfect others which I may omit; provided you observe the operations of Artists, and want neither Ingenuity, Instruments, nor other necessary means.

Furthermore, I have this hope, that having founded my Preparations upon Experience and Reason, and having avoided the prolixities of other Authors, there will be no cause to complain of my method, as having fix'd the virtues, doses, and uses upon the principal parts of which mixt bodies are compos'd, upon the various alterations which they undergo in Preparation, and the success which I have observ'd upon several trials which I have made, upon a thousand occasions.

The



The First Book :

Containing the

CHYMICAL PREPARATION OF VEGETALS

CHAP. I.

Of the Distillation of Vegetals in general.

THE Extent of the Number of Vegetals being no less than that of the Surface of the whole Earth, and their Differences, Form, and Vertues being no less unlimited than their Number, it is no wonder, if Chymistry having labour'd from time to time to invent what she judg'd expedient for the preparation of mixt bodies, find continual occasion to put those means in practice, and to add thereto several new ones to obtain its ends.

Distillation, as familiar as it is, is one of the principal operations of which it makes use for the separation and purification of the parts of Vegetals, as also of Animals and Minerals. And though the Galenick Pharmacy may have some knowledg thereof, and have made use thereof for a long time for the ordinary preparation of waters, however it cannot boast of having attain'd the perfection of that operation, no more than of having gain'd the knowledg of separating and distinguishing the parts that compose the mixt bodies. For not having follow'd other than the ordinary ways, nor having had recourse to other than the most simple and most common Instruments and means; and neglecting besides those numerous operations of Chymistry, they fail of their purposes, not being able to dissolve those mixt bodies which they submit to Distillation.

The reading of *Mesues*, *Avicenn*, *Serapion*, *Rhazes*, and all the ancient *Greek* and *Arabian* Authors, will sufficiently justify these truths, so that we must be forc'd to confess, that Galenick Pharmacy would soon loose those advantages which it enjoys, did it not borrow several exquisite preparations from Chymistry.

And for as much as the various nature of Vegetals, their different composition, and the more or less compactness of the parts, constrain the Artist to vary not only his Fire, but the Vessels and Instruments which he makes use of, more especially in Distillation; I will set down the various methods which the Apothecary ought to use; nor will I forget to shew how he is to act when he is oblig'd to distill several parts of a different substance together, and to mix together some parts of Animals and Minerals.

The principal effect of Distillation is to dissolve by heat the fluid parts of mixt bodies, and above all of Vegetals; to separate them from the rest in vapour, and to embody them again, and to cause them to trickle drop by drop from the holes

which the Artist has prepar'd to give them passage forth. Chymistry acknowledges three sorts of Liquors, which it draws from Vegetals by Distillation, the Watry, the Spiritous, and the Oily Liquor. Among which there is sometimes a fourth observ'd issuing out of certain Plants; that is to say, a volatile Salt. The Watry humour, under the name of Flegm, is easily separated from the other parts of the mixt body, when you move it by the heat of the fire. It is usually most plentiful, but least efficacious; nevertheless it is not to be despis'd, for besides that it is able to temper the activity of the other substances, it contains some essential parts of the mixt bodies, which it carries with it in Distillation; so that it may be kept sometimes for several months together without corruption, sometimes from one year to another, and produces good effects, as may be observ'd in the distill'd waters of Plants, that have neither taste nor smell. The Spiritous part is the most essential part that can be drawn forth by Distillation, and which all Chymistry acknowledges for an active principle, under the name of Mercury. There is usually to be met with, in this Spirit, a kind of acidity, with the scent of the Plant it self. It will keep a long time, and produces effects much more powerful than any that can be expected from the Watry humour. The Oily substance, which Chymistry acknowledges for one of the active principles, under the name of Sulphur, rises usually in Distillation among the Watry and Spiritous Liquors. It is burnable, and swims upon the top of the other substances, when it is pure; but it falls to the bottom when it is laden with any Salt or Terrestrial parts. This substance encloses within it self whatever the Aromatick Plants contain of most vertue. It is of a strong scent, and piercing taste, and may pass for the Quintessence of the Aromaticks. It may be preserv'd a long time, provided you do not expose it to the injuries of the Air.

CHAP. II.

Of the Distillation of Roots, and the various substances that may be drawn from them.

WE find some Plants without Stalks, some without Leaves, others without a Flower, others without Seed, and without several other productions, which are reckon'd to be of the number of Vegetals; but we find no Plant without some Root, from whence all the other parts draw matter for their nourishment, growth, and subsistence. And we may say, with reason enough, that it is as impossible for them to be what they are without the Root, as for the Root to be what it is without the production of the Seed; at least by some kind of Root able to produce its species, as in those of Saffron, &c. Nor can this Root subsist, nor produce all its parts, without the assistance of the Earth, which serves instead of a Matrix; without the heat of the Sun, which affords it necessary heat; nor without the help of the Water, which conveys to the Root what're the Earth contains necessary for its subsistence, and for the growth, distribution, and perfection of all its parts. We must be also convinc'd, that the Root, especially of Herbs that dye every year, can never impart those vertues to the Plant which it does, did it not possess them before. And therefore there we usually meet with all the principal vertues contracted together, which it is able to impart to the rest of the parts of the Plants; provided you gather them in time, when the Root is fit for production, which is at the end of Winter, or the beginning of Spring.

But though these considerations oblige an Artist to a particular esteem of the good parts and qualities which several Roots possess, and to endeavour to make several Chymical Preparations thereof; yet Distillation is one of those operations which it least employs, and which indeed is never practis'd but upon some Aromatick Roots, the principal parts whereof are easie to be drawn forth, and from whence I think it expedient to begin the Examples of Distillation, which I have propos'd to give in this Work.

Distil-

Distillation by descent is not to be us'd upon these Roots, for besides that it would consume the best of the substance of the Root; the violence of the Fire would manifestly alter their good qualities. But straight Distillation is to be made use of for this purpose; and you must also make choice of proper Menstruums and Dissolvents, wherein you may not only dissolve those parts of the Root which are pure and fit to be dissolv'd, but also cause the vapours to ascend together in Distillation, and then condens'd into Liquor, to fall down into the Recipient ready prepar'd. For this purpose you may make use of Cucurbits of Glass, of Potters Earth, or glaz'd Earth, with Glass-heads, to distill a small quantity of Roots. But when you distill any considerable quantity, you must make use of a Refrigerant, lesser or bigger, or of Vessels of Copper Tinn'd within, cover'd with their Moors head, and furnish'd with their Serpentine, which passes along a Vessel fill'd with cold water.

You must follow the same method for the Distillation of the Roots of Valerian. Masterwort, Angelica, Spignel, the Carline Thistle, and other Aromatick Plants, which are full of odorous, spiritful, and volatile parts, accompany'd with some Oil, and some volatile and fixed Salt.

For example: Take three pound of any one of these Roots dry'd, and having grossly stamp'd them, and put them into a great Cucurbit of Glass, pour upon them six pints of distill'd Time-water, and as much White-wine; having made choice of such a Cucurbit that about a quarter of it may remain empty. Then having fitted and luted on a Glass-head, and a Recipient for the beak of the head, leave them three or four days in digestion, over a very gentle Fire of Embers, or over a Cook's or a Baker's Oven. After which, having plac'd the Cucurbit in a Sand-Bath, make your Distillation with a moderate fire; which you must continue till the Water, that trickles forth, be almost without taste or smell; at which time let the Vessels cool, strain and press out the matters which remain in the Cucurbit, and having clarif'd the Liquor, evaporate the superfluous moisture, till it come to the consistence of an Extract, which you must keep apart by it self in a Pot close stop't. You may also dry the sediment, burn it, and reduce it into Ashes, to make a Lye thereof, after you have filter'd it, and consum'd all its moisture, to the coagulation of a Salt, to mix and keep among the Extract. You may do well to rectifie the Liquor distill'd, and in a Bath of Ashes or Sand, with a very moderate heat, to draw out the more subtle Spirit, which will be accompany'd with some odorous Oil that swims at the top; which you must separate and keep apart, in a little Glass Bottle very well stop'd, as a very precious Essence. The Water which remains at the bottom of the Cucurbit, being good for nothing, may be thrown away. The Extract thus prepar'd, containing nothing considerable in it self but the fixed Salt part of the Root, all the good parts being ascended in Distillation, cannot alone produce any extraordinary effects; however it may be of use, by giving it dissolv'd in its own Spiritful Water, which you may also enliven with its own Spirit, charg'd with its own volatile Salt, and mix it with some few drops of its own distill'd Oil, incorporated with a dram of Sugar finely powder'd, by means whereof you may mingle this or the like Oils with any sort of watry Liquor.

The substances which I have spoken of, powerfully resist the putrefaction of humours, and bad Air; so that they are us'd in all Epidemick distempers, and against the Pestilence. You may mingle and give them together, as I have said already, all these different substances, every one according to their just proportion; according to the nature of the sickness, and the constitution and condition of the Patient. The dose of the Spirit, well rectifi'd and mingl'd with its volatile Salt, is from a scruple to a dram. The dose of the Spiritous Water, from two ounces to six, and sometimes eight. That of the Oil, from two to seven or eight drops. And that of the Extract, charg'd with its fixed Salt, from half a dram to two drams. All these different parts tend to the same purpose, which is to fortifie the Heart, the Brain, and all the noble parts of the Body; to expel by sweat, or by insensible transpiration, the malignant humours that are capable of being expel'd through the pores of the Body. And you shall feel the effects according to the quantity of the dose administred. The Extract is somewhat purgative, by reason of its fixed Salt. For which reason it may be very well mix'd among Purgers, in sicknesses where the other good parts, that I have spoken of, are useful.

You

You may incorporate the distill'd Oil with the press'd Oil of Nutmegs, to make a Balsom to carry in your pocket, in some little Box of Gold, Silver, or Ivory. Giving to the Balsom the name of the Root of the Herb out of which the Oil was drawn; and making use of them not only for their pleasing scent, but also to fortifie the noble parts, especially the Head, by putting it up the Nostrils, and rubbing the Temples and Sutures of the Brain with it.

CHAP. III.

Of the Distillation of Juicy Herbs, esteem'd to be Cold.

THough we may have some reason to prefer the Juice of moist Herbs, and without scent, before the Water which is to be drawn from them; and that we must confess, that the fixed Salt, which Herbs may have, does not usually ascend in Distillation; yet it would be a difficult thing to be without these Waters, where there is an intention to please those Patients that cannot endure the taste of Juices or Decoctions. Besides, these Herbs are not always to be found, in regard they are dead all the Winter; nor will the juice or decoction keep many days without spoiling, unless you can rid them of their superfluous humidity that causes the corruption, or change their consistency from liquid into thick; or unless you scum, clarify, and boil them with Sugar or Honey, to keep them like a Syrup.

These Herbs are not to be distill'd by descent, nor side-ways, because that by those ways there could be no reasonable separation made of the pure parts from the impure; and that it would be a hard matter to prevent the latter from running and mixing with the former. For these reasons we only make use of the straight Distillation, which is only able to raise in vapour the most subtle Liquor of the Herbs, which falls not afterwards to embody in the upper part of the Limbeck, and to descend again, and so trickle into the Pipe which is fix'd into the Recipient. You must vary your Vessels and your fire according to the various nature of the Herbs which you distill; for you neither make use of such large Vessels, nor so great a fire, for those that are of a thin substance and cold in their quality, as for those whose substance is thick, and compos'd of hot parts. We make use for the first of Glass Vessels, or of Vessels made of Potters Clay, and varnish'd or glaz'd within. Yet the Distillation may be made in *Balneo Maria*, or the Evaporating Bath. But the latter must be distill'd in Vessels of Copper Tinn'd; of which there are some call'd Refrigerants, which above the upper part, that receives the vapours that the fire sends up from the substances, contain a small quantity of cold water, to condense those vapours, and cause them to descend into the Recipient. The others, call'd great Vessels, are cover'd with a *Moors-head*, so call'd by reason of its form, to which there belongs a Beak, to which the Serpentine is join'd, variously writh'd, which passes along a Tunnel fill'd with cold water. These great Serpentine are esteem'd before Refrigerants, because the vapours being rais'd, meet with more coolness, and are more easily condens'd, passing thwart such a great quantity of cold water, than if they were only cool'd by as much water as the Refrigerant could contain of it self. These latter consist of two parts, of which the lowermost, that contains the substances which are to be distill'd, is round and flat, and not above eight inches high. The upper part made like a Cope or a Judges Hood, proportionable at the bottom to the wideness of the Vessel below, which it ought to enchase, must be wider and more exalted than the ordinary Heads; you must also there fit on and solder a kind of Box of Copper, higher and bigger, to serve as a Wall, which is to contain a good quantity of fresh and cool water, which environing all the Head, and being empty'd and fill'd from time to time, facilitates the dissolution of the vapours, and prevents the scent of burning too, which the distill'd Waters easily contract, in those

those Vessels which are call'd *Rosaries*, because the common people use them for the Distillation of Roses; making use for the most part of Leaden heads, not considering that the vapours rising from the substances, and meeting in the inside of the Head, gnaw and fret off some particles of the Lead, which manifestly change the quality of the Waters that corroded them; the taste whereof is sweetish, and the powder white, which precipitates it self by degrees to the bottom of the Water; and is a certain sign, as well as the tart taste and greenish powder, which is found in the bottom of Waters distill'd in Copper Vessels not Tinn'd, that certain particles of Copper are corroded off, and dissolv'd in those Liquors.

Now for as much as Tin is the only metal able to resist the usual vapours which rise from Herbs in their Distillation, and the only metal that will not be corroded nor dissolv'd; therefore great care must be taken, to Tin very well the inside of Copper Vessels; and indeed it would do better to make the Head of Lattin, instead of Copper Tinn'd. Yet a Leaden Head is very proper for the Distillation of Nightshade, Plantane, white Roses, and other such like, which are design'd for Collyriums, and other outward uses, because the parts of the Lead which join thereto, increase the vertue of the Waters.

The heat of the *Balneum Mariae*, or the Evaporating Bath, being not of force enough to heat the quantity of matter contain'd in those Vessels, especially in the two first, to make a dissolution, they generally make use of an immediate fire of Coals; but you must be very careful to govern it well, which it is impossible to do, if you have not Vessels proportionable to the bigness of the Vessels that contain the matters; and if you know not how to open and shut the doors and the Registers just in the nick of time, to augment or abate the heat of the fire upon occasion. Nevertheless, sometimes the Bath of Ashes or Sand will serve turn, under the Rosary, especially when you would distill Herbs entire or chop'd, without any addition of moisture; or when you would distill the Juice of any Plant, whose cooling quality a fire too violent might chance to alter.

The best method of distilling Herbs to purpose, that abound in moisture, is to draw out the Juice and distill that, when you have purify'd it. It will not be necessary for me to lay down in this place, the method how to draw forth and purifie all sorts of Juices, having already done it in the first Chapter of the Second Part of this *Pharmacopoeia*, speaking of the *Galenical* preparation of these Juices. But it may not be amiss to make some reflexion upon the various nature of Juices, which depends upon the nature of the Herbs from whence they are drawn, and to have regard not only to the variety of the substances which compose them, but chiefly to the quantity of those that predominate in every one of them; to fit himself with Vessels, and order his fire in such manner, to the end he may find in the distill'd Water, that which should ascend by Distillation, and at the same time be master of the Salt parts that usually remain in the sediments of the Juice, or in the settlings of the Herbs from whence it was drawn.

You may to very good purpose put into Cucurbits of Glass, or Potters Earth, or glaz'd Earth with Glass heads, the purify'd Juice of the Leaves of the Water-Lilly, the greater and lesser Housleek, Wall-Penniwort, Lettice, Garden Nightshade, and such like Herbs that abound in moisture, have very little Salt parts, and less Sulphury; the Distillation whereof is made in *Balneo Mariae*, or the Evaporating Bath, when you seek rather for the refreshing quality, than the preservation of the Waters distill'd. But when you would cause the most essential part of those Herbs to ascend by Distillation, then you must make use of the Bath of Ashes or Sand, moderately heated. For by this means the Water rises with some spiritfule volatile parts, somewhat saltish, and accompanied with some acidity, which serves to preserve and render it efficacious. You may also search for the fixed Salt in the settlement of the Herbs, to macerate it in their distill'd Water, though the small quantity you will find is hardly worth your trouble.

You may distill also the Juice and also the Leaves of these Herbs entire, or chop't, by a Rosary cover'd with a head of Lattin, or Copper Tinn'd, plac'd in a Bath of Ashes or Sand; and draw off the good Waters, provided you take care to order your fire, in Distillation; and be careful not to roast or scorch the Substances when their moisture is almost consum'd.

There is not much difference to be observ'd in their vertues, no more than in the use of the Waters which are drawn from these Herbs. They are inwardly made use of to allay the heat of Fevers, and assuage the heat of cholerick humours,

humours, as also to provoke sleep, giving from two ounces to seven or eight, alone or mingl'd with some proper Syrrup, in manner of a Julep. They are also made use of outwardly, as well to cool and smoothe the complexion, as to dissipate redness, to cure Erysipela's, and to extinguish all manner of volatile fires, and external inflammations. The Water of Garden Nightshade is with good success apply'd to the last of these distempers; but it is never taken inwardly, unless in Gargarisms.

CHAP. IV.

Of the Distillation of Sorrel.

THE great affinity which the several sorts of Sorrel have with Herbs already treated of, may be a reason sufficient enough for you to distill them with the same fire, and to make use of the same Vessels: But because these Plants contain in their Juice an essential Salt, acid, tartarous, more plentiful, but very different from that of the Herbs of which I have spoken in the foregoing Chapter, the separation of which I have omitted, as of which there is no advantage to be made without a most particular care; it is requisite you should know how to draw forth this essential Salt.

After you have drawn forth a good quantity of the Juice of Sorrel, gathered just when it begins to run up into Seed, at which time the moisture thereof is best digested, and the good qualities thereof in their chiefest force; you must purify the said Juice, and having fill'd therewith three quarters of several Glasse Cucurbits, and cover'd them with their heads, and plac'd them in a Sand Bath, upon a moderate fire, distill the Water forth till the Juice in every Cucurbit be two thirds diminish'd. Then letting the Bath cool, and having stop'd up the distill'd Water, pour out the Juice that remains in the Cucurbits by inclination into a Linnen Bag, to separate it well from the Feces; and putting the clear Liquor into a clean Glasse Cucurbit, cover'd with its head, make a new Distillation, by a *Balneum Maria*, between lukewarm and boiling; which you must continue, till the Juice remaining in the Cucurbit, come to be as thick as the consistence of a Rob; at which time let the Vessels cool, and afterwards carry the Cucurbit into a Cellar or a Vault, where the essential Salt of the Sorrel will chrySTALLIZE in a few days, and stick to the bottom and sides of the Cucurbit. Then by inclination pour forth into a little Cucurbit, the Liquor that swims above the Salt; and evaporating it in *Balneo Maria*, till it prove as thick as the former, put it also into the Cellar to chrySTALLIZE. You may dry and keep both the one and the other in a Glasse Bottle well stop'd, or dissolve them and keep them in the distill'd Water, to render it of more vertue. You may also, the better to purify it, dissolve it in a quantity of the Water distill'd; then filter that Liquor through a brown Paper, and having evaporated the Water to the thin skim, by a moderate heat, chrySTALLIZE the Salt in a Cellar, put it in a Bottle close stop'd, and keep it for your use.

This Salt contains in it the best and most essential part of the Sorrel. It opens obstructions of the Bowels; it cuts and attenuates thick and viscous humours, and by that means sensibly redresses the distempers of the Liver and Spleen; it excites an appetite, and helps the digestion. The dose is from half a scruple to half a dram, in its proper Water, or in some Broth. The distill'd Water is good to cool the heat of cholerick Fevers especially. It is also put into Cordial Waters, and the same dose is given of the Water as of the Salt.

CHAP. V.

Of the Distillation of hot Herbs, bitter, and without scent; and of some other Preparations that may be made at the same time.

YOU may distill Fumitory, Hops, Succory, Blessed Thistle, and other Herbs juicy, bitter, and without scent, proceeding according to the same method as in the Distillation of Sorrel. You may also make use of the same Vessels, and distill with the same fire. But because there is much use made of the distill'd Water of these Herbs; and for that they contain in them a plentiful Salt, between nitrous and tartarous; and for that you may also without altering their qualities, make them endure a hotter fire; you may, to good purpose, make use of a Refrigerant, or a large Vessel cover'd with a Moors-head, and its Serpentine that runs athwart a Pipe fill'd with cold water, to distill their Juice, which you must have purify'd in the same manner as that of Sorrel.

But because the essential Salt, which chrySTALLIZES in the Juice that remains at the bottom after Distillation, is usually foul and clouded, as well by reason of the Terrestreities that abound more in these Herbs than in the Sorrel, as by reason of some sulphury particles that accompany those bitter Herbs, especially when they are in their full vertue; you must not only be careful to filter the Juices with all the exactness that you observe in the filtering of Sorrel, but to seek out also other ways to purify those Salts more perfectly. Wherein, that you may obtain your end, and save the Salt which remains in the sediments of the Herbs, from whence you have drawn the Juice, you must dry that sediment; then having burnt it, and reduc'd it to Ashes, make a Lixivium of the Water distill'd from the same Herbs, and having dissolv'd the chrySTALLIZ'd Juice, then strain the whole through a course Paper. Then putting the filter'd Liquor into a Glass Cucurbit, with its head, draw forth the Water by a *Balneum Maria*, till you observe in that which remains in the Cucurbit, a small film swimming upon the Liquor, and covering it like a little skin. Then give over Distillation, and let the Vessels cool; and after you have let the Cucurbit remain four or five days in the Cellar, pour forth into a little Glass Cucurbit by inclination the Liquor which remains; and having again evaporated it to the *Pellicula*, dry that Salt with the former, and keep it for use, in some Glass Bottle very well stop'd, or dissolve and keep it in its own distill'd Water.

The Salt which you draw from the settlement of those Herbs, finding it self depriv'd of its nitrous volatile part, consum'd by the Urtion and incineration, contains only the fixed tartarous Salt part. Whereas the Salt which remains at the bottom of the Vessels after Distillation, is equally compos'd of the nitrous, volatile, and tartarous fix'd, which are the principal substances of those Herbs. Nevertheless, the conjunction of the fix'd tartarous Salt of the settlement, agrees very well, being united to the other two, the vertue whereof it sensibly increases.

The Waters of Succory, Hops, and Fumitory are very much commended for purifying the mass of the Blood, and for curing the distempers of the Liver and Spleen, as also those of the Stomach which proceed from the putrefaction of humours. However they operate with more force when their Salt is dissolv'd in them. The dose whereof is from half a scruple to half a dram, and sometimes to one dram. The dose of the Water from two to six or eight ounces. The Salt is also sometimes given in Broth, or other Liquors; or else mingl'd with other Salts, or with Opiates, or with other Remedies.

Blessed Thistle abounding more in nitrous sulphury parts, than those Herbs I have mention'd; the Salt and Water which is drawn from thence, work also more effectually. Now because the more volatile Salt and sulphurous parts of this Plant, easily ascend with the Water in Distillation, and being join'd therewith,

are able to insinuate themselves into all the little Veins and Pores of the Flesh, and to attenuate the gross and thick humours that are contain'd therein. It is no wonder, that this Water should be every day given to provoke Sweats, and to carry away the subtil humours that accompany Fevers, especially such as are malignant, sending them forth in moist vapours, or by insensible transpiration.

CHAP. VI.

Of the Distillation of Wormwood.

Vulgar Wormwood, which is known for the largest of all, is more bitter than Succory, Hops, Fumitory, or Carduus Benedictus. It abounds more in fix'd Salt. It contains a sulphury, oily, and somewhat volatile Salt part, which Succory, Hops, and Fumitory have not; and of which Carduus has much less; which cannot be separated to the purpose from the fix'd parts, but by upright Distillation, and after you have added a good fair quantity of common water, or to do better, of its own proper Water. For though you may draw forth the Juice of Wormwood, while it is yet very young, and before it is grown up into Stalks, and then distill it as you distill the Herbs already spoken of; nevertheless, the confusion of the parts, and their defect of digestion, hinder the success of the Distillation. Whereas you may bring it to better perfection, if you stay till the Wormwood is grown up into Stalks, and that it is between flowering and seeding; at what time the Plant has made its principal digestions, and is in a condition to afford the Artist all the good parts which he can look for.

The most part of the Authors who have wrote of the Distillation of Wormwood, advise to make use of Fermentation. But my opinion is, that it is much better to let it alone, because the acid extraneous Fermentative, which you must be oblig'd to make use of, to procure the Fermentation pretended to, and the length of time which it would take up, would give way to the fixation or dissipation of the chiefest part of the sulphury and volatile parts which you look for; whereas you shall save all, proceeding otherwise.

Gather a good quantity of the Plants of Wormwood, about the full of the Moon, when they are between the Flower and the Seed, and after they have separated and thrown off all that they had of hard and woody, weigh them into twelve pounds, bruise them well in a large marble Mortar with a wooden Pestle, and having put them into a large Copper Vessel Tinn'd within, pour on forty Rints of River-water, heated between lukewarm and ready to boil; or if you would do better, pour on the same quantity of distill'd Wormwood-water, as hot as the former. Let not the substances take up above two thirds of the Vessel; then place the Vessel upon a Baker's Oven, buried in Sand as high as that part which contains the substances; then having cover'd the Vessel with a Blind-head, and well luted the jointures of both Vessels, leave it there for the space of four natural days; at the end whereof, having unluted the head, and set the Vessel upon a proper Furnace, cover it with a Moors-head with its Serpentine, and make a quick Distillation with Coal, but moderate, and distill it so long till the Water have neither taste nor smell; then letting the Vessels cool, strain and press out that which remains in the Vessel, and having clarify'd the Liquor with whites of Eggs, and strain'd it through a woollen Cloth, evaporate the superfluous moisture over a gentle fire, and continue evaporation till it have attain'd the consistency of soft Electuaries, or that of Pills. Then dry, burn, and reduce to Ashes the settlement of the Distillation, and having made a Lixivium or Lye, and separated the fixed Salt by the usual ways, keep it apart, or dissolve it and preserve it in the spiritous Water. You may also rectifie all the distill'd Water in *Balneo Marie*, and receive the spiritous Liquor and volatile Salt, which will first ascend with the oily part; then having separated those two Liquors by a Glass Tunnel, or otherwise, preserve them apart in Glass Bottles well stop'd. After that, continue the rectification, and receive and stop up the odoriferous and spiritous Water, which

which will follow the two separated Liquors, casting away the watry and unprofitable part that remains in the Vessel after rectification.

The principal vertues which Authors attribute to Wormwood, is to cut and attenuate flegmatick humours that gather in the Stomach, and to assist nature to expel them. It is very proper against diseases of the Liver and Stomach, the weakneses whereof it corrects, exciting the appetite and helping digestion. It is also good against the Worms, and diseases of the Matrix. And in regard that Wormwood, without any preparation, has all these vertues, we may well believe that the purer parts thereof, which Chimistry undertakes to separate, being deliver'd from the grosser and more earthy, will produce much more efficaciously all the effects that can be expected from it.

The same method is to be observ'd in the Distillation of all other hot Plants, bitter and odoriferous; as also of those which having scarcely any thing of bitterness, and containing less fixed Salt, are recommendable for their oily, odoriferous, and some volatile Salt parts.

CHAP. VII.

Of the Distillation of Scurvygrafs, Cresses, and other moist Plants, accounted Antiscorbutick.

THough the most part of those who have written concerning the Chymical Distillation of Plants, recommend Fermentation to be us'd to to all Antiscorbutick Plants, as well as for Wormwood and the like; and though perhaps I may not be of an opinion contrary to those, who loving tediousness and trouble, think it the best way; nevertheless the desire I have not to waste time, and to avoid trouble, when it may be done with advantage, have oblig'd me to a method more easie, and which I esteem better.

All the World agrees, that Scurvygrafs, Water-Cresses, and Garden Cresses, Rocket, Brooklime, and such like Herbs, that have a sharp, piquant, and in some measure Aromatick taste, abound in Spirits and volatile Salts; that those Salts and volatile Spirits are very subtle, and the most essential parts of those Plants; and that the chief design of the Artist ought to be, to separate them from the other parts, and to make good use of them. The subtlety of these good Spirits is the reason why they are so subject to dissipation; and that it is so difficult a thing to pass those Plants through all the degrees necessary to Fermentation, without loosing more of the good parts than the Artist, with all his care, knows how to retrieve, after that Fermentation. For which reason, my opinion is, that instead of having recourse to any extraneous matter to advance Fermentation, we ought to content our selves with a proper Menstruum, which by dissolving and then joining themselves to the most essential parts of these Plants, may also carry them away with it in Distillation, without changing their nature, but augmenting rather than diminishing their vertue.

For the better success wherein, having gather'd the quantity which you intend of one of these Herbs, when it is in Flower, having slightly chopt it, and having put it in a Copper Vessel Tinn'd within, pour upon it White-wine, as much as will cover the Herbs and three fingers over and above; in such manner nevertheless that the substances shall not take up above a third part of the Vessel; then having plac'd it upon a proper Furnace, and cover'd it with a Moors-head well luted, and having its Serpentine to it, running athwart a Pipe fill'd with cold water, and having also luted the Recipient to it, leave the Vessels in that condition, without any fire, for twenty-four hours; after which kindle the fire in the Furnace, and having begun Distillation with a continu'd fire of Coals, so order it, that the drops that trickle down one after another, yet not too fast, may cause

the spiritous and volatile parts of the Plant to ascend and distill by degrees with those of the Wine, and that all the fix'd and particularly the Salt parts may remain among the settlement, at the bottom of the Vessel, to be separated afterwards by straining and pressing the whole sediment; and to the end they may be reduc'd to an Extract, after you have clarify'd the Liquor which contains them, and evaporated the superfluous moisture over a very gentle fire. This Distillation is to end, when the drops that fall are almost insipid, which is a sign that all the spiritous matter is ascended.

But to the end you may have the Spirits of these Plants more full of vertue, more pure, and in greater quantity, after you have emptied the Vessel, and set apart that which was contain'd therein, you shall put into it as much of the same Plant, as at first, and pour upon it all the Water which you have distill'd, and as much good White-wine as of the same Water. Then having cover'd the Vessel with his Moors-head and Serpentine join'd to it, and having luted them as well as the Recipient, proceed by Maceration and Distillation, as the first time. After that, you shall still do better, if after you have set aside the settlement with the former, you put fresh Herbs into the Vessel, and having pour'd upon them all the spiritous Water distill'd, you make a new Distillation. For having carefully luted the Vessels, and well order'd your fire during Distillation, you shall have a Water well charg'd with the Spirit and volatile Salt of the Herb which you have distill'd; of which you may afterwards make rectification in a Matras, or large big-bellied Bottle with a long neck, cover'd with its head and well luted, with a Recipient well luted to it, plac'd in a Sand Bath under a moderate fire, keeping apart in a Glass Bottle close stop'd the Spirit charg'd with the volatile Salt, that ascends first; and keeping apart also the spiritous Water that follows the same Spirit; continuing the Distillation till the drops that fall are almost insipid. As for the settlements, draw from them an Extract, according to the method already describ'd. And that you may save all that the Plant has good for any thing, dry the settlement, and having reduc'd it to Ashes, make a Lye with common water and filter it, and having evaporated the superfluous moisture, mix the Salt with the spiritous Water distill'd, or which is better, with the Extract. In regard its principal vertue is to purge away the most gross matter by seige or by urine, for which purpose the fixed Salts principally serve.

This Extract is given alone in a Bolus, or dissolv'd in some proper Liquor, from half a dram to two drams, and also to half an ounce; or else mingl'd with purgatives, abating the dose of the Extract, and proportionating it to their strength and quantity.

The Spirit and volatile Salt of Scurvy-grass, Cresses, and other Herbs of the same nature, and the spiritous Waters drawn off afterwards, are powerful remedies, and very specifick, for the ease and cure of Scorbutick distempers; the cause whereof is attributed to thick and cold Serosities, difficult to be dissolv'd, which are mingl'd with the mass of the Blood, and slack'n its circulation; whence ensue all the noisom symptoms that attend upon that distemper.

The dose of the Spirit well rectify'd, and charg'd with its volatile Salt, is from half a scruple to half a dram, and also to one dram. The Spirit may be giv'n in its own proper Water, in Wine or Broth; and the use thereof may be continu'd as occasion requires, taking it sometimes several times in a day, though in a lesser quantity. The effect of these remedies is to consume and dissipate the most obstinate Serosities of the Blood, either by sweet or insensible transpiration; to purifie the whole mass of Blood, and restore that activity which is necessary to circulation; to fortifie the noble parts, especially the concoctors of nourishment; and to remove all putrefaction.

CHAP. VIII.

Of the Distillation of Baume.

Balm is an Herb so pleasing in its scent, and also in its taste, and so recommendable for its virtues, that it well deserves to have its place among the Distillations of other Herbs. The greatest part of those who have written of Distillation, would have some other Liquor mixt with it, by reason of the little moisture it has when it is in Flower; but that would but do it an injury, in regard there is as much moisture in the Plant it self as needs to be desir'd.

You must take care to gather a good quantity of Balm; when it is young, tender, and juicy; to the end you may either extract the Juice by Distillation, as I have already shew'd, or distill it whole, or chopt in the Rosary, till its moisture be almost all ascended. Either way you may distill as much as you have occasion for, and keep it in Bottles well stop'd, till there be more Balm in Flower and Seed, which you must bruise in a Marble Mortar with a wooden Pestle, or else cut very small; then having fill'd the two thirds of a Copper Vessel Tinn'd within side, pour upon it the distill'd Water which you have ready, till it swim about three fingers breadth above the Herbs; after which having cover'd the Vessel with the Moors-head, well luted, and having join'd to it also its Serpentine and Réci-pient, after a maceration of twenty-four hours over a very gentle heat, make the Distillation with a continu'd Charcoal fire; but so order'd, that the Distillation may be no more violent then I have already prescrib'd for Herbs almost of the same nature, continuing it till the Water that distills have almost lost its flavour and smell. You may also empty out that which remains in the Vessel, and put in fresh Balm; and having separated and set aside that little Oil that swims upon the top of the Water, pour that Water upon the fresh Balm, and make maceration and digestion, as before; by which means you shall have an odoriferous Water, containing in it all that the Balm has of volatile, and most spiritous; and besides that, some little Oil that swims upon the top of it, and which deserves to be preserv'd with the rest; as well for its pleasant smell, as for the good effects which it may produce, in distempers of the Brain, and in those of the Heart, the Stomach, and the Matrix; as also by reason of the mixture that may be made hereof with the press'd Oil of Nutmegs, to use instead of a Balsom, like the Oil of Aromatick Roots. It may be mixt from two drops to seven or eight, with some drams of fine powder'd, to divide all the parts, and make it fit to be mix'd with all sorts of moist Liquors, particularly with its own Water, as the most proper to second all its virtues.

The Water is prescrib'd with good success in melancholy distempers, in malignant Fevers, suppression of Women's Courses. The dose and way to take Balm-water is the same with the preceding Waters.

There may be an Extract made of that which remains at the bottom of the Vessel at every Distillation, proceeding in the same manner as in the preparation of other Herbs; that is, by drying, burning, and reducing to Ashes the sediment, to fetch out the Salt, either to keep it apart, or mingle with the Extract. The Extract is given in the same dose, and serves for the same uses as the former; for in regard it contains only the fix'd parts of the Balm, it is chiefly proper to fortifie the principal parts, and the parts of concoction, to take away the sharpness of acids, to cut and loosen gross and viscous humours; to resist putrefaction and putrifi'd humours, which it helps to purge away by stool and urine.

CHAP. IX.

Of the Distillation of Myrtle Leaves.

They that inhabit the Southern parts of *France*, where Myrtle grows in great abundance in the Woods, find among that great quantity of Leaves what-ever is requisite for their Distillation. For they stamp and press the tops in the beginning of the Spring, for the Juice, which they may either distill alone, or with the Leaves bruised. But because in these Northern parts, we have none but what we are forced to plant and bring up with care and industry, which is not enough to afford that quantity which might be desired, we must make use of that little we have, and supply the best we can the defect of moisture, without which we cannot well perfect Distillation.

For example, take three pound of the Leaves of Myrtle newly gathered, and having bruised them in a Marble Mortar with a wooden Pestle, and put them into a Glass Cucurbit, pour upon them six pints of the Juice of Knotgrass, or Rupturewort, and having covered the Cucurbit with its Glass Cover, luted the joints with Amydon, or paste of fine Flower, and fitted the Recipient to its beak, keep the whole in digestion over a Cook's Oven, during twenty-four hours; at the end whereof set the Cucurbit in a Sand Bath, and make a Distillation with a moderate fire, continuing it till the Water have neither savour nor smell; then take care to separate and keep that little Oil which swims at the top of the distilled Water, and which would be more plentiful in hot Countries.

Could you get another equal quantity of Myrtle Leaves, you might after you had emptied and kept that which remains in the Cucurbit, put the fresh Myrtle Leaves in the Room of it, and having poured the distilled Water upon them, observe the same maceration and Distillation as before; and by that means you shall have a Water much more efficacious, upon which will swim a small quantity of new Oil, which you must add to the former; then draw forth the Extract from the remains, and the Salt from the settlement, after you have reduced it to Ashes, as I have said before; and keep them apart, or mingle them together.

The distilled Water of the Leaves of Myrtles, is very much commended for weaknesses of the Stomach and Bowels, and the distempers that attend it, as also for spitting and other losses of Blood. It is given either alone from two ounces to six, or else mixed with half an ounce of Syrrup of Myrtles, or some other Astringent. It is also good to close up the natural parts of Women after lying-in, as well taken inwardly as applied by fomentation to the parts. You may reinforce the Water with a drop or two of its Oil, having incorporated it with a dram of fine powdered Sugar. You may also make use of the Oil in Balsoms, which are prepared to comfort and fortify the noble parts, for the smell is sweet and very Aromatick; you may also make use of it to anoint the parts, having first fomented them with the Water. The Extract preserving in it self the impression of the terrestrial part of the Leaves, may produce good effects in all distempers that have need of closing and fortifying. The dose is from half a dram to two drams, either dissolved in its own Water, or in some other Liquor; it may be mingled also in Opiats, or in other Remedies.

I believe that these Distillations of Herbs which I have set down, will afford sufficient examples for all the rest, without any necessity of multiplying any more; so that it will be time now to come to the Distillation of Flowers.

CHAP. X.

Of the Distillation of Flowers in general.

Flowers are esteem'd the fairest production among Vegetals. They are the Ornament of Gardens, the delight of the Country, the recreation of the Sight, the desire of the Smell, the hope of the Seeds and Fruits that are to follow, and the substance of several exquisite Remedies, every day prepar'd by the one and the other Pharmacy. Flowers are those parts of Plants which to us seem to be most pure, which are least charg'd with earthinesses, and most easie to be dissolv'd; the different substances whereof Chymistry separates with less trouble and violence. Nevertheless there is more care to be us'd in Distillation of them, than of any other part of the Plants, in regard their parts are very open, and for that the principal parts are very subject to dissipation; besides, that there are some Flowers that will not endure Distillation at all, nor the least touch of the fire, without a manifest alteration of their qualities, especially those that yeild any sweet odour, which is the thing most carefully to be preserv'd. For this reason it is, that the Artist ought above all things to dive into the most secret knowledge of the parts that compose the Flowers, before he goes about to distill them, to the end he may be able to fit his fire, and to chuse the most proper Vessels and means to separate to the purpose, and at the same time to preserve in their purity the several substances which are to ascend and descend in Distillation, and to save as much as in him lies, the good fix'd parts, which oftentimes remain at the bottom of the Vessel.

We many times make use of the same Vessels for the Distillation of Flowers as for that of Herbs, but because the delicacy of the substance of Flowers, renders them usually more apt to receive the impression of the fire than Herbs are, there is great care to be taken, so to order the fire that it may not alter the good qualities of those which you desire to separate from the rest by Distillation; or that it should not cause to ascend with the good ones those that should stay at the bottom of the Vessels; or least that by too much continuing the fire or augmenting it, you scorch the substances at the bottom of the Vessel, and cause the whole Distillation to smell of burning too. For the avoiding of all which inconveniences, I will endeavour to shew you the most proper ways.

CHAP. XI.

Of the several Distillations of Roses.

THE different methods which are to be observ'd in the Distillation of Roses, proceeds rather from the diversity of spirits, places, opportunities, and means to do it, than from the variety of the sorts of Roses, or the different proportions of the parts that compose them; in regard there is not any sort of Rose which may not undergo all the Distillations which are to be invented or practis'd upon all the rest. We find in the parts that compose Roses, the five different substances which Chymistry acknowledges to be in the composition of mixt bodies, viz. the Watry, Spiritous, Sulphury, Salt, and Earthy parts. Nevertheless they are variously proportion'd in every sort, whence proceed the differences principally observ'd in the colour, smell, and savour. For the volatile substances abound more in some, and the fix'd in others. The Red Roses, commonly call'd Provence Roses, abound more in earthy parts, and fix'd Salt, than all the other Roses. They have also many watry parts that are united to the foregoing, so that the spiritous and sulphury lye very deeply conceal'd, and appear not till after

after the watry parts have quitted their station. For which reason, it is not usual to distill these Roses till they have lost their superfluous moisture; and not then neither, without mixing them with other Aromaticks.

Pale Roses are they which we most often distill, and upon which we not only practise several Distillations, but also upon which both the one and the other Pharmacy exercise most preparations, and extract most remedies. They contain much moisture, attended with several volatile spiritous particles, a few salt ones, and some few oily and sulphurous; both the one and the other very odoriferous. They have also less earthy parts than the Red ones, but as much fix'd Salt; which being united with the more gross sulphury parts, and more deeply lodg'd, and not having pass'd the fire of Calcination, which the most part of Salts endure in their purification, purge most gently bad, but above all, flegmatick humours. I have said in the second Part of this *Pharmacopœa*, speaking of the preparation of Syrup of Roses with Sugar and the Juice of Roses, that in making the decoction in a Glass Cucurbit, in *Balneo Maria*, and covering it with a Glass head well luted, you may save then the vapours which rise from the Juice of Roses, which would otherwise dissipate, and draw out a very good Rose-water. But because the Shops have need of a much larger quantity of Rose-water then can possibly be drawn forth this way, recourse must be had to other means.

They that will distill Pale Roses, or make any other preparations thereof, must be careful to gather them soon after the rising of the Sun, and if possible, in fair weather, that they may not be charg'd with any extraneous moisture, and that the several substances that are to be drawn forth by Distillation may be altogether pure.

The most gentle method, but the slowest for the Distillation of Roses so cleans'd, is to bruise them, and fill about two thirds of a large Glass Cucurbit, and having cover'd it with its head well luted, to make the Distillation in *Balneo Maria*, between lukewarm and boiling, or in an evaporating Bath boiling, till the Roses are almost dry'd in the Cucurbit. For by this means you shall have a Rose-water very odoriferous, but a small quantity.

You may also put equal parts of Roses stamp'd and the Juice of the same Roses in one of the same Glass Cucurbits cover'd with a head well luted, and make a Distillation thereof in a Bath of Ashes or Sand. For by well ordering your fire, especially toward the end, you shall have a Rose-water, at least as good as the first; and from the remains may draw a purgative Extract, as good as any other that may be drawn out of the Rose.

And to content those that would preserve the colour of the Roses in the Water distill'd, take a handful of dry'd shred Provence Roses, and having sprink'd them with never so little good Spirit of Sulphur or Vitriol, or the Juice of Limons, fill the hollow of the Canal of the Glass head with it, before you fit and lute it to the Cucurbit; for then by well ordering your fire during the Distillation, you shall have, without changing the good smell, or qualities expected, a Rose-water of a fair colour, and as much or more Vermillion then the Roses from whence they were drawn. By means and ways not much unlike to this, you may in distilling all sorts of Waters of the same nature, give them the colour which you desire; as also, if you please, the scent of Musk, Ambergreese, or any other Aromatick, by pulverizing them, and putting them wrapt up in a little Cotton, into the Canal or beak of the head.

You may also put into a Rosary of Copper well Tinn'd, the Rose-leaves, whole or bruise'd, and add also as much as you please of the Juice of the same sort of Roses, and make the Distillation in a Bath of Ashes or Sand; for then ordering your fire prudently, you shall have an excellent Rose-water. You may also save the Extract, as before.

Some Ladies distill Rose-water by descent, with a great deal of ease, spreading the Roses about an inch thick upon a fine Linnen Cloth, ty'd upon the top of a large Glass Pot, or else of glaz'd Earth, and applying over it the bottom of a flat Dish of white Lattin, or of some other Vessel of some such kind of substance, proportionable to the extent of the Roses, having the inside of its hollownes cover'd with Ashes about half an inch thick, and the upper part of the Ashes cover'd with soft burning Coals. For by this means the heat of the fire penetrating the Ashes and the Dish, and warming the Roses, distills the Water into the Pot. This Water in truth is not so good as that of which I have given you the

the preparation ; nor will it continue so long ; and yet it is not to be rejected.

Some there are that would have the Roses put into a Cucurbit of glaz'd Earth, and applying thereto a Cover of white Lattin, or Copper Tinn'd, and pierc'd with little holes, turn it upside down, and place it in a proper Furnace, and adding a Recipient underneath its orifice, light a fire round about the Cucurbit, and make the Distillation by descent, as we distill Wood. But this is the way to burn the Roses ; and the Water would very much want the good qualities which it ought to have. Besides, it would but be an injury to the Distillation, when there are so many better ways, and more to the purpose.

They that have need of much Rose-water, may instead of Cucurbits, or Rosaries, distill their Roses in great Vessels of Copper Tinn'd within, and cover'd with their Refrigerant and their Moors-head, with a Serpentine running athwart a Pipe of cold Water, proceeding as I have already shew'd in the Distillation of Herbs ; bruising the Roses, and moistning them with the Juice of other Roses, or the distill'd Water which you may have sav'd the year before, and making Distillation over a continu'd fire of Charcoal, but very moderate. You may also pour the distill'd Water upon other Roses put into the same Vessel, to make a new Distillation, and also repeat the same operation several times to have an excellent Rose-water.

But because it is necessary for us to employ our greatest care to find out all the good parts of mixt bodies ; and for that it is possible, in distilling Roses, to raise a sulphury and inflamable part, and by the same means also a most odoriferous Oil, though not much in quantity ; it will not be from the purpose to shew you which way to go about it.

For example, take forty pound of Pale Roses cleans'd, and having bruisd them well in a Marble Mortar with a wooden Pestle, and strew'd the whole quantity by degrees with two pound of grey Salt powder'd, put the whole, if you can, into a large Pitcher of Potters Earth, or at least into two ; and having stamp'd and crush'd the Roses into a soft mass, so close as not to be penetrated by the Air, and having so order'd it, that the Pitchers may be quite full, stop them up with a good Cork stopple cut fit, and clos'd with yellow melted Wax, to prevent air from entering in ; then set the Pitchers in a Cellar five or six weeks ; after which, when you come to op'n them, you shall perceive the Roses to have a kind of a smell of Wine intermix'd with acid ; which is a sign of their fermentation, and of the aptness of the spiritual parts to separate from the terrestrial, and to ascend in Distillation. Then take out a pound of these Roses, and having put them into a Glass Cucurbit, stop up the Cucurbit as exactly as before, and cover it with a Glass head well luted ; and having well fitted and luted the Recipient, make a Distillation in *Balneo Maria*, between lukewarm and boiling hot, continuing the same till the moisture of the Roses be almost quite distill'd off. After which, having empty'd the settlement out of the Cucurbit, put in the room thereof the quantity of seven or eight pound of the Roses enclos'd in one of the Pitchers ; and having stop'd up the Cucurbit as before, and pour'd upon the Roses the Water of the first Distillation, put on the head again, well luted as well as the Recipient, and set the Cucurbit in a Bath of Sand, and with a moderate fire make the Distillation, till the humidity of the Roses be almost all distill'd. After which, the Vessels being cool'd, and the settlement empty'd out, put more fermented Roses into the Cucurbit, and so pour the distill'd Water upon them, and renew the Distillation till you have no more Roses left. Then putting one part of the distill'd Water into a Matras with a long neck, cover'd with its head well luted, and having fitted a Recipient to it, well luted after the same manner, make a rectification in *Balneo Maria* with a moderate fire ; and having distill'd about the twelfth part, which is the spiritous and inflamable part, put it up into a Bottle very well stop'd ; keeping very carefully apart the Water that remains in the Matras, which will be very odoriferous. Then continue to rectifie, at several repetitions, all the Water distill'd, and having mingl'd together all that is ascended of spiritous, make a new rectification in an Evaporating Bath, in a Matras with a long neck perfectly well luted ; by this means you shall have an inflamable Spirit, which may be call'd an Ethereal Oil of Roses, charg'd with their volatile Salt ; as much to be commended for its pleasant and penetrating odour, as for its vertues. Add the remains of this rectification to the rest you have made, and keep them together in Glass

Bottles well stop'd, as a Rose-water much better then you can draw forth by ordinary means.

Keep these Bottles for some days in the Cellar, where the Oil will ascend by degrees to the top of the Water, and swim above it in little flakes, almost like Snow; whence you may separate it by straining it through a fine Linnen Cloth, and taking up the Oil with a little Silver Spoon. Put this Oil at the same time in a double Glas Bottle well stop'd, and keep it for your use, returning the Water into the Bottles whence you took it out, and stopping them up close again.

The dissolution which the Ethereal and inflamable Spirit of Roses makes of the oily parts, during fermentation, and the similitude of the substance between them, is the reason that it unites to it several parts thereof in Distillation; and that you find much less Oil among the Rose-water after rectification, then by proceeding otherwise. And therefore, they that rather desire the Oil, then the inflamable Spirit, will sooner obtain their desire, by re-distilling several times their Rose-water upon new Roses; for by that means they may separate much more Oil, then from a greater quantity of Roses after fermentation.

Some, to extract the ardent Spirit of Roses, content themselves with some days maceration; after which, having added an equal weight of Wine to that of Roses, they make the Distillation. This in truth is a shorter and more easie-method. But then the inflamable part of the Spirit must be rather attributed to the Wine then to the Roses; whose Spirit is not able to disengage it self from the other substances, as not having been sufficiently fermented. Nevertheless this method is not to be rejected for the preparation of the ardent Spirit of several parts of Plants, which loose much of what they have of use, in staying too long for their fermentation; or may be subject to considerable alterations of their qualities, by the addition of other assistants which are made use of to advance fermentation. But for this I think it best to let it alone; provided care be but tak'n of proceeding as I have directed; because the Roses have in themselves that acid which is necessary to provoke fermentation, without being put to borrow any ascititious ferment, or that there should be any fear of any considerable dissipation of their volatile parts. We must also believe, that that acid having left the proper substance of the Roses, after it has disengag'd the volatile Salt and sulphury Spirits from the grosser substances, unites it self strictly to them, and is to be found mix'd with them, after the separation of the rest by Distillation from the grosser parts, unable to ascend.

The use of Rose-water, both inwardly and outwardly, is so well known, that it is needless to insist upon it. The ardent Spirit of Roses is so odoriferous and so peircing, that one drop alone is enough to perfume a full Glas of common water. It is excellent against weaknesses, faintings, and palpitations of the heart. The dose is from three or four drops to fifteen, twenty, and thirty, in its own proper Water, in Wine or Broth, or in some other Cordial Liquor. It is also apply'd to the Stomach, to the Region of the Heart, to the Temples, to the Wrists, and to the Soles of the Feet in fainting fits. It is given with success in malignant Fevers. It may be us'd also to provoke sweat, given in seven or eight ounces of Carduus-water. The Oil works the same effects as the Water; but be not too prodigal of it, because of its rarity. It is giv'n inwardly, from one or two to five or six drops; being incorporated with some few drams of fine Sugar powder'd, and dissolv'd in its own proper Water, or in the same Liquors as the Spirit. You may also incorporate it with press'd Oil of Nutmegs, and make thereof a Balsom of Roses very odoriferous. The Oil and Spirit of Roses are equally useful for men and women; only it must be kept from them who cannot endure sweet smells.

You may draw by the ordinary way from the remains of all the Distillations, a purgative Extract; and by burning the sediment, and reducing it to Ashes, extract the Salt to keep it apart, or mingle with the Extract. The dose of the Extract is from half a dram to two or three drams, to be giv'n either in a Bolus or else in some proper Liquor. It is also mingl'd with other purgatives, putting in more or or less according to the quantity or dose of those things which you mingle with it. The dose of the Salt is from half a scruple to half a dram, and sometimes one dram, in some proper Liquor.

Musk Roses (call'd Damask Roses), Dogs Rose, White Roses, and all the other sorts, may be distill'd in the same manner as the Pale Roses; and you may extract
from

from these almost the same substances; though you may observe in them considerable differences, as well in their quantity as quality, by reason of the several proportions of the parts that compose every Rose, and their several knittings and compactures; the difference whereof is sensibly manifested by the diversity of smell, colour, and form.

CHAP. XII.

Of the Distillation of Lavender Flowers.

THE Flower of Lavender has too little Juice to think of distilling it to the purpose, without adding to it some other Liquor. For what you could draw from thence in a Glass Alembick, or a *Balneum Maria*, or in a Rosary in a moderate Bath of Ashes, would hardly recompence the time and trouble you must expend. Only you must be careful in pouring upon the Flowers some proper Liquor, but above all to chuse the Water of the same Flower, which you may have left of the last year; or for want of that, some other Cephalick Water.

Having gather'd your Lavender upon a fair day, about noon, when it is well in Flower, take only the Flower in the Ear, and so cleanse it, that the hard bottom of the Flower, which helps to sustain and form the Ear, may be taken away, and only the pure Flower remain. For example, take six pound of the Flowers, thus cleans'd, and having put them into a great Copper Vessel Tinn'd within, plac'd in its proper Furnace, and having pour'd upon them twenty pints of their own proper Water, or some other Cephalick, cover the Vessel with a Moors-head well Tinn'd within, furnish'd with its Serpentine Tinn'd in the same manner, and running along a Tunnel of cold water; then having luted well all the jointures, and the end of the Serpentine with the Recipient, kindle in the Cinder-place of the Furnace a very small fire, enough only to warm the substances, and to maintain them in their moderate lukewarmness; and having continu'd them so for three or four natural days, kindle a Charcoal fire in the Hearth-place of the Furnace, so that the Water which distills may fall, not in drops, but in a continu'd string, till you have drawn out by Distillation about two thirds of the Water which you have made use of. Then let the Vessels cool, and having separated them, and put the Oil that will swim upon the spiritous distill'd Water into a Bottle apart, and having also strain'd and press'd out that which remains in the Vessel, put in again the like quantity of fresh Flowers; and having pour'd upon them not only the spiritous distill'd Water, separated from its Oil, but also the Liquors press'd out of the substances which remain'd after Distillation, put on the Moors-head again, with the Serpentine and Recipient, and lute them all well, and after a maceration of three or four days, distill off the Water and the Oil as before, and make the same separation. You may also pour the same Water, and the Liquor press'd from the remains, upon fresh Flowers, if you have them ready, and make a new Distillation, and repeat the same several times. Though it be true, that after two or three cohobations of the Water upon the fresh Flowers, the Water will be charg'd as much as is necessary with the spiritous parts of the Flowers of Lavender; there being no advantage in these reiterated cohobations, but to draw forth the greater quantity of Oil.

You may draw forth an Extract from the remains of these Distillations, proceeding after the same method which I have already describ'd. You may also extract a Salt from the sediment press'd, dry'd, burnt, and reduc'd into Ashes, though it will not be very much, no more then in any other odoriferous Cephalick Flowers, which abound more in sulphury and in some volatile Salt parts, then in fix'd Salt.

The dose and use of this Extract and Salt is almost the same with them that went before. The distill'd Oil of Flowers of Lavender is very much commended for the Epilepsie, Apoplexy, and Palsie, and in general, for all diseases of the Brain,

giving from two drops to seven or eight, incorporated with fine powder'd Sugar, and dissolv'd in its own Water, or in some other Cephalick which may assist its vertues. You may also put it up into the Nostrils, apply it to the Temples, and to the Sutures of the Skull; and also incorporate it with Oil of Nutmegs, and make a Lavender Balsom, to mix with Apoplectick Balsoms, as other distill'd Oils are mingl'd.

If instead of the distill'd Water of Lavender, or any other Cephalick, you use the like quantity of good Wine in Distillation of these Flowers, you may draw forth an ardent Spirit very penetrating.

CHAP. XIII.

Of the Distillation of Flowers of Rosemary.

THE Flowers of Rosemary, well cleans'd from their Cups, and whatever there is of green in the Flower, are of a substance so little compacted, and the parts which you design should ascend in Distillation, are so subtle, so volatile, and so loose from the grosser parts, that I see no reason for those that have allow'd it the preparation of the Queen of Hungary's Water, which is the most common Distillation of the Flowers of Rosemary, to make a maceration for three days in the Spirit of Wine, or to put themselves to the trouble to seek out Vessels proper for that use, and after that to proportion a fire of digestion, during all that time, seeing that one maceration made in the cool of the morning, in the Cucurbit which you use for Distillation, is of power sufficient to cause the Spirit of Wine to penetrate into the very heart of the Flower; as also for that the volatile parts ascend more easily with the Spirit of Wine. I believe rather that these far fetches about, were only invented to puzzle young beginners, and to make that Distillation seem hard to them which is very easie, especially when you have good Spirit of Wine, and Rosemary Flowers that are every way in their prime.

Having caus'd your Rosemary Flowers to be gather'd in a fair day, two or three hours after Sun-rising, and having cleans'd them from all the green part, weigh out four pound, and put them into a large Glass Cucurbit with a strait neck, and having pour'd upon them six pints of Wine well rectify'd, after you have press'd down the Flowers into the Wine, and cover'd the Cucurbit with its head, lute well the jointures, and place it in a Sand Bath, and having fitted and luted a Recipient to the beak of the head, leave the Vessels in that condition all night long; in the morning kindle a fire under the Bath, and order it so, that while the Spirit distills, the head may not be so much as warm; you may also cover the head with a Linnen Cloth, doubl'd several times, and dipp'd in cold Water, and re-dip the Cloth and cool the head from time to time, to hast'n the dissolution of the vapours that ascend. Continue this Distillation till you have drawn forth about four pints of Spirit, which will be very pure, and charg'd with the best and most volatile substance of the Flower. Then cool the Bath, unlute the Vessels, and put the distill'd Spirits into a Bottle well stop'd; then strain and press forth the Liquors that remain in the Cucurbit; and having clarify'd the Liquor, and return'd it into the Cucurbit, cover'd with its head, and the Recipient ready, renew the Distillation in the same Sand Bath, and continue it so long till you see the Liquor very near as thick as a Rob. After which, having cool'd and unluted the Vessels, turn out the Liquor into a Pipkin well glaz'd, and boil it over a gentle fire to the thickness of an ordinary Extract; keep every Liquor apart, the first of which will prove the best, and the most piercing.

This is the Spirit to which our Moderns have giv'n the name of the Queen of Hungary's Water; by reason of the wonderful effects which a Queen of Hungary receiv'd by it at the age of seventy-two years. This is that Water, the great reputation whereof, and the great vent for it at Paris for many years since, has caus'd several persons, as ignorant as wicked, to prepare it after their manner,

ner, in the Provinces where Rosemary Flowers abound, and where you may have the Spirit of Wine very cheap; and who instead of making use of the Flowers of Rosemary well cleans'd, as they might easily do, leave a great part of the Herby part, which makes the scent of the Water stronger, but more tart and unpleasing, as well as the taste; and who instead of the Spirit of Wine well rectify'd, make ordinary *Aqua Vita* serve their turns, deluding by means of the strong scent of the green parts mingl'd with the Flower, upon the credulity of persons not able to distinguish the ascitious strong scent from that of the Flowers, which ought to be sweet and pleasant; and imposing the sharp and harsh taste of the same parts for the penetrating taste of the Spirit of Wine well rectify'd. Neither is it to be wonder'd at, that these abusers of the people to their faces, should gain so much by this Water, and sell more then they that prepare it with so much fidelity and skill, who are not able to sell it at so low a rate, without great loss.

The Spirit of the Flowers of Rosemary well prepar'd, is good against all cold distempers of the Brain. It is also an excellent remedy against the cold diseases and affections of the Nerves and Joints, against Rheumatisms and cold Gouts. It dissipates the pains of the Head caus'd by Flegm, dissolves the vapours that cause Vertigo's, fortifies the memory, helps deafness and noises in the Ears, as also weakness of sight. It heals contusions of the Head and all parts of the body, and prevents the coagulation of the Blood in those parts; dissolving the coagulation, and causing it to transpire. It asswages the Tooth-ach, it fortifies the Stomach, preventing the looseness and weakness of that and of the Bowels, by taking away the sharpness of the acids, which are usually the cause thereof. It creates an appetite, helps digestion, and opens obstructions of the Liver, Spleen, and all the Bowels, as also of the Matrix, the vapours whereof it suppresses. It claims a power to preserve and revive the natural heat, and to restore the functions of all the parts of the body, and to make old men young, that is to say, to ease them of a great many of those diseases that attend upon old age.

It is giv'n inwardly from a scruple to one dram, in Wine or some Cephalick Water or Cordial. Some drops may be snufft up into the Nostrils, lay'd to the Temples, and to the Sutures of the Skull. It is apply'd upon contusions by the means of little pillows dipt therein. It is apply'd to Rheumatisms, and to all sorts of pains and defluxions, as also about the Eyes to fortifie the sight, and dropt into the Ears for the cure of such distempers as happ'n therein. It is made use of to wash the Face, the Neck, the Arms, the Hands, alone or mix'd with the Water of wild Tansie, Lillies, Water-Lillies, the Spawn of Frogs, and such like, to preserve the complexion of the Beauty, and prevent wrinkles. In short, there is hardly any remedy is to be found, that produces so many and so good effects, as this Spirit.

The Liquor which is press'd forth and distill'd, not possessing the more volatile parts of the Flower of Rosemary, which the first Distillation has tak'n away, and finding it self charg'd with the watry part which ascends with the Spirit of Wine that remains at the bottom of the Vessel, is neither in truth so pure, neither has it the same vertue as the first Spirit. But it deserves to be preserv'd, in regard it also contains several parts less volatile of the Flowers, which the last Spirit of Wine carry'd with it, and which may produce good effects, by staying longer in the Stomach then the former. It may serve for the same uses as the former, especially inwardly, but then the dose must be doubl'd, by reason of the watry part which is mingl'd with it. There may be also an Extract prepar'd of the Liquor which remains, which is very serviceable in Cordial, Stomachical, and Cephalick remedies, giv'n in the same dose as the other Extracts.

You may distill the Flowers of Petty Mugget, Sage, the Line-tree, French Lavender, and the like, proceeding according to the same method set down for the distilling of Rosemary and Lavender Flowers.

CHAP. XIV.

Of the Distillation of the most odoriferous Waters which are to be drawn from the Flowers of Vegetals.

THE methods which I have set down for the Distillation of the several parts of Plants, are much better then any of those which Chymistry usually puts in practise. But in regard the Commands of *Monsieur D' Aquin*, First Physician to the King, have engag'd me to communicate to publick, several things which I thought to have reserv'd to my self, I freely impart what I have found to be best and most curious in these particulars.

You must be careful to distill Dew in its season, and keep the spiritous Water in a Bottle well stop'd. You must be careful to gather together in the month of *May* or *June*, in fair weather, good store of Cows-dung or Ox-dung, dry'd of it self in the meadows, where those creatures have been feeding. This Dung contains in it the first principle of the Herbs which the Oxen or Cows have eaten; but it has lost the seminal vertue; the smell thereof being somewhat like the smell of Musk. The use thereof is well enough known, since the Water has been distill'd from time to time, and goes by the name of the Water of a thousand Flowers, because of the great number of Herbs and Flowers that were in the first matter of the Dung from whence it was distill'd. Make choice in their season of such Flowers as you would distill, and having laid them in beds or layers in a great and large Cucurbit, with equal portions of this Dung dry'd and pulveriz'd, and having water'd every layer one after the other, with the spiritous Water of Dew, and continu'd the watering and the stratification till the substances take up almost the half of the Cucurbit, cover it with its Glass-head, and having carefully fitted and luted it, together with the Recipient to its beak, make a Distillation thereof only by the heat of the Sun in the Summer, till the moisture be almost all distill'd out. Then about midnight, or at least two hours before Sun-rising, unlute the Vessels (the choice of this time being absolutely necessary, if you intend to preserve a good odour in the Water); and having at the same time got ready new Flowers in another Cucurbit of the same likeness, and pour'd the distill'd Water upon the Flowers, put on the head, and after you have well luted it, as well as the Recipient, make a Distillation thereof in the Sun, as at the first time. Then unlute the Vessels in the night, cohobate or sprinkle the distill'd Water upon new Flowers, till the Water be perfectly odoriferous. You must so order it, that neither the head nor the Recipient may be expos'd to the Rays of the Sun during Distillation, and that only the Cucurbit may be hot. You must also cover the head with a Linnen Cloth, several times doubl'd, often dipp'd in cold water, to advance the dissolution of the vapours that ascend with the matters. Cows-dung and Spirit of Dew, are very necessary in the first Distillation of Flowers, but not in the latter. And in case it be a difficult thing to have the heat of the Sun so strong, as in some Northern Climates it may fall out, there an Evaporating Bath must serve turn, or a Bath of heated Air, if you have the convenience. By this means you shall have Waters perfectly odoriferous; of which one ounce will afford more good scent then ten times as much of those that are distill'd the ordinary way.

CHAP. XV.

Of the Distillation of ardent Spirits very odoriferous, which may be drawn from odoriferous Flowers and Herbs.

WE must believe, that though the Flowers have in themselves those advantages which we do not observe in other parts of the Plants which produce them, they are nevertheless very subject to dissipation, by reason of the tenuity of their substance. And though we may in some measure reap the advantage of their good scent, and of many other excellent qualities which they contain, by the several helps of Chymistry daily practis'd. However it is a very difficult thing to draw from all sorts of Flowers ardent Spirits well scented, if you do not search in the Plant it self for the basis and foundation of the odour of the Flower; and if you make not use of fermentation, which is as it were the Soul of the Spirits of Vegetals, as putrefaction is the Soul of their Oils.

You must add to wild Roses their fruit call'd the Hep, containing the Seed; and to the manur'd Roses theirs, well bruis'd. To the Flowers of Sage, Rosemary, Marjoram, Mint, Betony, Balm, Lavender, Thyme, *French* Lavender, Gil-flowers, Violets, Jelsomine, &c. their Seeds well bruis'd. To the Flowers of Lillies, Flower-de-luces, Piony, Angelica, &c. their Roots and Seeds bruis'd and stamp'd. To the Flowers of Oranges, Limons, and Citrons, the Fruits well stamp'd. To the Flowers of Petty Mugget and Elder, their Berries well stamp'd.

There is no necessity to add any moisture of another nature, to any of these, which have moisture enough in themselves, or in their Fruits or Berries. But there is a necessity of adding a little Spirit of Wine, or some other Liquor, as also a little Leaven of Bread or Yest, when the Flowers mingl'd with the Seeds have not moisture enough in themselves to make up a mass reasonably soft, and fit to be fermented. To accomplish your design therefore, you must stamp the Flowers with their parts which are to sustain them, and be as it were a foundation to them; and if they be but soft enough to be penetrated by the acid ferment, which naturally breeds therein, put them into a great Pitcher of Potters Earth, and fill it well, often pressing and squeezing the substance down; but if the mass be not soft enough, add to it a little Wine, or Water of the Flower distill'd the ordinary way, having first steep'd a little Leven therein to hast'n fermentation; then having carefully stop'd the Pitcher with a Cork and yellow Wax melted, give it time to ferment, which will dispose the spiritous parts to separate from the gross; and when the Spirits have attain'd a kind of scent like Wine, and somewhat sowre, make the Distillation thereof in *Balneo Mariae*, in a Glass Cucurbit, cover'd with a well luted head, and receive the ardent Spirit into the Recipient, after you have fitted it and luted it well. By this means you shall have an ardent Spirit, extraordinarily charg'd with the odour of the Flower; which you may afterwards distill, if you please, upon new Flowers, without the addition of other parts, and keep it a long time in its perfect goodness, in a Bottle very well stop'd. Roses afford so great a plenty of odour, that it is no wonder, that a man need take so little care for the conjunction of the parts, of which I have spok'n, for the Distillation of their ardent Spirit. But though you may draw from them that Spirit, proceeding as I have said when I have spoke of their Distillation, yet that Spirit will be more powerful and more plentiful by adding their Hep to them.

But because it is not always possible to have ready the Seeds, Berries, Roots, and other parts of Plants, which may serve as a foundation for the Flowers which you intend to distill, you must have recourse to some extraneous substance, though homogeneous, which joining its Salt, Sulphur, and Mercury to the Flowers, may retain and unite to it self their odour, and whatever they have of sulphury and inflammable, by means of the fermentation; and which serving them for a foundation, may afford and join its Spirits to those of the Flowers in Distillation.

Manna,

Manna, Sugar, and Honey are equally proper for these uses. You may make use of that which you have next at hand. The proportion must be one part of one of the three, to six parts of the Flower, out of which you would extract the inflammable Spirit. You may make an exact union, by adding also, if it be necessary, a small quantity of some other liquor, and a little Leven, proceeding over and above in the same manner for fermentation and Distillation of the Flowers with the Seeds and other parts of the Plants, according to the method already prescrib'd. You must be careful to lute exactly the jointures of the Vessels, as well in fermentation as in Distillation, to save all the Spirits. You may do well to distill them also upon new Flowers, to the end they may be the stronger in scent and other good qualities.

You may according to this method, draw forth the odorous and inflammable Spirit from all sorts of Aromatick, as also from all odoriferous Plants.

CHAP. XVI.

Of the Distillation of Seeds and Berries; and in the first place of Anniseed.

Generally we make Infusions and Decoctions, rather than Distillations of most Seeds, which being accounted cold, or at least temperate, abound in watry and mucilaginous parts, dissoluble in homogeneous Liquors, or which have a superfluity of oily parts accompany'd with an aquosity, which may easily be separated from the grosser by expression, and without fire, extracting the emulsion thereof with proper Liquors. We acknowledg the Seeds of Mallows, Marshmallows, Quinces, Fleawort, &c. to be watry mucilaginous Seeds; those of Cucumbers, Melons, Gourds, Lettice, &c. to be oily. Sometimes we squeeze out an Oil by expression from hot Seeds. But not to speak of preparations here, which I have spok'n of in the Galenick part, I will only shew you the Chymical Distillations of the most principal Seeds, beginning with Anniseed.

You may proceed several ways to the Distillation of Anniseed, according to the different intentions which you propose to your self. For sometimes it is enough to mix two or three pound with fifteen, twenty, or thirty pints of *Aqua Viæ*, and to make a simple Distillation by a Refrigerant, or in a Vessel of Copper Tinn'd, cover'd with a Moors-head, and fitted with a Serpentine, to have a Spirit of Wine strong of the Anniseed, which is call'd Anniseed-water. But if you desire to have by the same Distillation, the Water, Spirit, and Oil, charg'd with their volatile Salt, you must proceed thus:

Take for example, twelve or fifteen pound of Anniseed, while it is yet green, or at least the greenest you can get; and having bruis'd it, and put it into a great Copper Vessel well Tinn'd within, pour upon it Rain or River-water, or which is better, distill'd Anniseed-water, till it swim above the Seed four good fingers breadth. At the same time, place the Vessel upon its Furnace, and having cover'd it with its Moors-head, and fitted and luted on the Serpentine, crossing a great Pipe full of cold water, and also fitted and luted a Recipient to the Serpentine, kindle a small fire in the Cinder or Ember-place, enough only to heat the substances never so little, and only to cause the Water insensibly to penetrate the substance of the Anniseed. Continue this heat for the space of three natural days, to make a kind of putrefaction of the Anniseed. After which, having kindl'd a fire in the Hearth-place of the Furnace, begin your Distillation, and continue it with a moderate fire, till two thirds of the Water be distill'd off, which you put with the Anniseed into the Vessel; at which time take away the fire, and having unluted the Recipient, and separated and set apart in a double Glass Bottle well stop'd, the Oil that will swim upon the spiritous Water distill'd; when the substances are cold, empty the Vessel, and strain and press out the remainder. Then, having put into the Vessel as much more bruis'd Anniseed as at the first, and pour'd the
distill'd

distill'd Water upon it, and the Liquor press'd out of the remainder; cover, lute, and fit the Vessel, Serpentine, and Recipient, as before; and proceed in all things as in the first Distillation; and separate the Oil from the spiritous Liquor. You may pour the distill'd Water and Liquor upon the new Anniseed; repeating the same as often as you find it convenient. For by this means you shall have as much more Oil, and a spiritous Water more plentifully charg'd with the scent and good qualities of the Anniseed.

The reiterated sprinkling of the distill'd Water upon the new Seed, is that which makes more Oil than you would have by the sprinkling of new Water, which would always retain to it self some little quantity. Nor would it be amiss to take the same course upon other occasions. Nevertheless you may, if you please, separate that little Oil from the Water distill'd, by putting it in a double Glass Bottle very well stop'd, and exposing it to the hot Sun for some days. For by this means that portion of the Oil which is mixt among the Water, and gives it a whitish colour, will ascend to the top of the Water, and gather together at the neck of the Bottle, from whence you may separate it.

Some there are, that mingle an ounce of Niter, or Sal Tartar, or raw Tartar in powder, with every pound of Anniseed, when they go about to distill it; pretending this way to get more Oil. But they that consider the aptness of Oils to join themselves to the fix'd Salts, as you may observe in the making of Soap, may well think, that these Salts, not being able to mount, fail not to retain to themselves some part of the Oils; so far are such practitioners from obtaining a larger quantity of Oil by that device.

And because we distill Anniseed rather for the Oils sake, then for its other good parts, you may draw forth more than is usual, by putting the Anniseed bruis'd, with its Water distill'd, into a Glass Cucurbit, cover'd with a strong Vessel well luted, and placing the Cucurbit in Horse-dung, as high as the substances, leaving it there for fifteen days, or three weeks. For by the putrefaction which will happ'n to the Anniseed, the oily parts will be better separated, and you shall have more Oil then by any other way.

The Oil and spiritous Water of Anniseeds is very much commended in all cold distempers of the Stomach and Bowels, and particularly in windy Cholicks; it is no less commended for the creating an appetite, and helping digestion. It is very successfully us'd in distempers of the Breast, when there is any occasion to cut and loosen the viscous Flegm that sticks to the Lungs. They are also very proper to increase milk in Nurses, to dissipate the wind of Dropsies, to stay the irregular motions of the Matrix, and to facilitate the Birth; to assuage the sharp pains of little Infants, and to ease the pains and noises in the ears, proceeding from wind and cold humours. The Oil is given in its proper Water, from two drops to seven or eight; being incorporated with powder'd Sugar. The Stomach or Navil may be anointed therewith; it may be dropt into the Ears, mixt with Oil of sweet or bitter Almonds, or with some Cephalick Water.

The Seeds of Fennel, Caraways, Cummin, Dill, Hartwort, Smallage, Bishops-weed, and the like, may be distill'd the same way as Anniseed; and you may draw from every one, according to its kind, substances not much unlike to those which you draw from Anniseed. But you must expect less Oil; the chief reason whereof is, because you never make use of these Seeds when they are green, but when they are dry, and sometimes very old.

CHAP. XVII.

Of the Distillation of the Seeds of Scurvygrafs, Mustard, and Cresses.

IT is not to be wonder'd at, that the Spirits, Oil, and volatile Salts of Plants, ascend usually one among another in Distillation, in regard they have very much affinity and aptitude to join together, and that it is also impossible to separate them in such manner, but that they will retain some particles the one of the other; besides, that there will be some Flegm mixt among them. The volatile Salt, more especially, is oftentimes so intermix'd with the other substances, that it is a very difficult thing to part it; or discern it either, unless it be very plentiful, and manifest it self by the smell. Sometimes there is so small a quantity in several watry Herbs, accounted cold, that there is no way to discover it, much less to separate it. You may observe in the Distillation of several hot Seeds, particularly of Spoonwort or Scurvygrafs, Mustard, Cresses, and such like, the mixture of their Oil, Spirit, and volatile Salt; which are their most considerable parts. You may also make a separation thereof, but not purifie them so, but that there shall remain in every one of them some particles of one another. So that it is no great difficulty to understand the parts that predominate in those Seeds, because that while you champ them, they fill your Palat with their piercing and penetrating parts; which are the certain evidences of their volatile parts, more especially of the salt and sulphury, that are so smart upon the sense of smelling, and ascend to the Brain with a more than ordinary violence.

Several ways are to be us'd for the Distillation of these Seeds. For some, after they have well bruis'd such a quantity of Seeds, as they intend to distill, and have fill'd therewith two thirds of a large Pitcher, made of Potters Earth, pour upon it Rain or River-water lukewarm, till it swim two or three fingers breadth above the Seed; then having stop't the Pitcher exactly, they set it three natural days upon a Bakers Oven, there to ferment; then having pour'd it all out into a Copper Vessel Tim'd, with all the jointures of the Moors-head, Serpentine, and Recipient well luted. They make a Distillation thereof, over a moderate fire: And in the first place, they draw forth the Spirit, Oil, and volatile Salt, mix'd together; together with a little Flegm, which they will raise along with them; then continuing the Distillation for some time, they draw forth a Water yet more charg'd with the three principles, very proper not only in Scorbutick Distempers, but also to pour again upon more new Seeds, to make a new Distillation. They separate the Oil, and keep it apart in a double Glass-Bottle well stopp'd; as also the Spirit, which is well laden with the volatile Salt, of which the Oil also is not unprovided.

Others pour good White-wine upon the bruis'd Seed, instead of Rain-water or River-water, and giving the Wine but just time to penetrate the Seed, they only make a maceration from the cool of the evening till morning; then they distill the whole, as before.

Others having well bruis'd one sort of these Seeds, and put them into a Glass Cucurbit, they pour upon them the Spirit of Wine well rectify'd; then having cover'd it with its head well luted, and fitted a well luted Recipient to the beak, they make the Distillation thereof in *Balneo Maria*, or else in the Bath of Ashes, with a moderate fire; and they draw out an Oil and a Spirit very penetrating, and very strong of the volatile Salt of the Seed.

But these Seeds may be distill'd to very great purpose, without any addition, and without bruising; by filling therewith two thirds of a Cornute or Retort of Potters Earth or Glass luted; for having plac'd it in a Furnace of Reverberation cover'd, and having fitted and exactly luted a Recipient to its beak. The Distillation may be made by a gradual fire, very small at the beginning, but augmented by degrees, for ten or twelve hours together, to extremity of heat. By this means you shall find in the Recipient, the Oil, Spirit, volatile Salt, and Flegm mingl'd

mingl'd together, which you may afterwards rectifie in a Bath of Sand, with a moderate fire, in a Mattras with a long neck, cover'd with its head exactly luted, and furnish'd with a small Recipient fix'd to it in the same manner. By which rectification the volatile Salt will mount first, and coagulate like a white Chrystalline substance; from whence you may take it out if you please, unluting the head, and putting another luted in its place, and shutting up the Salt with great care and speed into a strong Glass-Bottle, so stop'd that no part of it may exhale, nor the moisture of the Air dissolve it into Liquor. Then go on with your rectification, separating and keeping apart the Spirit charg'd with the volatile Salt, which will always ascend first, as well as the volatile Oil, which will swim at the top, while the greatest part of the watry substance remains at the bottom of the Mattras, with the thickest and grossest part of the Oil, which may be thrown away by reason of its thickness and ill smell, though it may be well enough outwardly apply'd against cold pains.

It will be needless for me here to set down the vertues, doses, and uses of the Spirits, volatile Salts, and Oils drawn from the Seeds, no more then those of the spiritous Waters which follow in Distillation; in regard the same proportion will hold which I have already set down, speaking of substances, almost of the same nature, drawn from Scurvygrass. Yet I may say, that there is something to be got from these Seeds, better digested and more subtle then that which you can draw out of the Herbs, which have not attain'd to the perfection of Seeds. We ought to believe also, that the Spirit, volatile Salt, and Oil of these Seeds, may produce good effects in all manner of cold diseases of the Brain, and in those of the Nerves and Muscles, as also in Palsies. In which cases, you may not only use with success, in anointing the parts, the rectify'd Oil, but also that which was never rectify'd, and apply it either alone, or mix'd with *Unguentum Martiatum* or Human Grease, or with Oil of Vipers, or the Philosophers Oil, Oils of Lawrell, St. Johnswort, and the like.

Some use Leven to advance the fermentation of these Seeds. But there is no need of it, by reason of the abundance of subtle parts whereof they are compos'd, and their great inclination to quit the terrestrial parts, which are not many.

CHAP. XVIII.

Of the Distillation of Elder-Berries.

I Do not undertake to speak here of all Preparations that may be made of the greatest part of the parts of Elder; nor to give this shrub all the Encomiums it deserves, of which several others have sufficiently discours'd. For, not being willing to depart from my subject, I shall only content my self here to set down the particular Distillation of the Berries, and the way to save all their parts.

Having caus'd a good quantity of Elderberries to be gathered when they are full ripe, and having cleans'd them and bruis'd them, press out the Juice; and having fill'd therewith a little oaken Barrel, set it in the Cellar to ferment: as if it were Wine. And then when you perceive that the Juice has acquir'd a winish odour, somewhat intermixt with acid, tap the Barrel a little above the Fæces, and having drawn out the clear juice, put it into a Copper Vessel Tinn'd within, and having cover'd it with a Moors-head well luted, and having fitted to its beak a Serpentine luted, crawling along a Pipe fill'd with cold water, and a Recipient at the end of the Serpentine, make the Distillation with a moderate fire; and keep apart the ardent and penetrating Spirit, which will first ascend, till you have distill'd about two thirds of the Juice which was put into the Vessel. At which time give over the Distillation, and put up the distill'd Spirit very close; and then having cool'd the Vessels, pour out by inclination into a woollen Bag, the Juice that remains in the Vessel, to separate it from the sediment. Then, putting the clear Liquor into an Earthen Pipkin glaz'd within, evaporate the superfluous moisture over a very gentle fire, which you must continue till the Juice be as thick as an Extract, which is to be put up into a Glass Pot well cover'd.

In the mean time take care to expose to the Sun, or to the Air, the sediment of the Berries, to separate the Grains, which you may make good use of by stamping them, and pressing out an Oil proper to provoke an easie vomit; which may be given from half a dram to a dram and a half, in Broth, in Beer, or in any other proper Liquor.

The Spirit of Elder is very much commended against cold distempers of the Brain. It is Diaphoretick; it purifies the mass of the Blood, and facilitates circulation; it resists the putrefaction of humours, and expels the malignity of Fevers and Poyson. It eases those that are troubl'd with the Gout and Dropsie. It opens the obstructions of the Matrix, and suppresses the vapours thence arising. It is given in its own proper Water, or in some Water of the same nature, from half a dram to two drams. The Extract may be also giv'n in the same dose, in Bolus or dissolv'd in its own Water, or mingl'd with the Spirit, for the same distempers for which the Spirit it self is commended. You may also burn and reduce the sediment to Ashes, and extract a Salt from it, to mingle with the Extract, or to dissolve in the distill'd Water, to augment its vertues. You may also make the same preparations of the Berries of Dwarf-Elder, or Danewort.

CHAP. XIX.

Of the Distillation of Juniper-Berries.

THE Berries of Juniper, being of a substance that contains not much of moisture, you cannot draw forth the Juice to distill, as you do from Elder-Berries. Whence it comes to pass, that you must have recourse to some foreign moisture, and to vary your method according to the several substances which you desire to draw from thence. For if you have a design to raise an ardent Spirit from these Berries, you must cause them to undergo a fermentation; and also add a small quantity of Leven, Honey, Sugar, or Manna, to the Liquors necessary for the requisite dissolution and separation of the subtle and volatile from the gross parts. But this is to be consider'd, that while you excite and cause this ardent Spirit to rise, you shall not compass so much Oil as otherwise you might do, because the fermentation carries the greatest part of it into the ardent Spirit. Nor is there any doubt to be made, but that the Leven changes the nature and qualities of that which remains after Distillation; so that the Extract drawn from thence, will not be so well qualifi'd. But because the vertues expected from the ardent Spirit will be much inferior to those which you will meet with, by proceeding otherwise in the Distillation of the Berries; and for that by using a small quantity of Spirit of Wine instead of Water, you may with more ease extract a Spirit as subtle, and of as great vertue, as that which is to be expected from fermentation; I think it the better way to follow that method.

Take five or six pound of Juniper-Berries, fully ripe, and full grown; and having bruis'd them in a Marble Mortar with a wooden Pestle, fill up the best half of a Glass Cucurbit; and having pour'd upon them the Spirit of Wine well rectify'd, till there remain but one third part of the Cucurbit empty, cover it with a Vessel of Rencounter, and having perfectly luted the jointures, put it in Sand, or upon a Bakers Oven, and leave it there for three natural days, which will suffice for the penetration of the Wine into the Berries, and for the dissolution of their most volatile parts; then having unluted and tak'n off the Vessel of Rencounter, and in its place luted on a head upon the Cucurbit, and fix'd a Recipient to its beak, make the Distillation in a Sand-Bath, with a moderate fire, and you shall have a subtle inflammable Spirit, charg'd with the best and most volatile parts of the Juniper-Berries.

But you shall do better, and save at the same time all the best parts of the Juniper-Berries, proceeding after this method: After you have bruis'd a good quantity of these Berries, and fill'd about the two thirds of one or more large Pitchers of Potters Earth, pour in water between lukewarm and boiling hot, and stop

stop them up well; and having let them stand eight days upon a Bakers Oven, make the Distillation in a Copper Vessel Tinn'd within, and cover'd with a Moors-head carefully luted, having both the Serpentine and Recipient join'd to it; proceeding in the same manner as in the former Distillations; and continuing the Distillation till the Water that distills be almost insipid. By this means you shall have a Water charg'd with the volatile Salt and spiritous parts of the Berries, accompany'd with a volatile Oil, white and odoriferous, which will swim at the top, which you may separate by a Cotton-wool, or by a Tunnel, or by some other Vessel proper for these separations, and keep apart in a double Glass Bottle well stop'd. You may, if you please, rectifie the Water in a Sand Bath, in a Cucurbit of Glass cover'd with its head well luted, and cast away the part which is purely watry, which remains at the bottom of the Cucurbit after Distillation; or else pour upon new Berries the Water of the first distilling, and repeat maceration and Distillation as before. And by this means you shall have more Oil, and the Water will be more spiritous, and more abounding in volatile Salt.

But for as much as all the good parts of the Berries do not ascend in Distillation; but that there remains considerable parts among the Water at the bottom of the Vessel, especially a kind of substance like Honey, accompany'd with the grosser Sulphur and fix'd Salt of the Berries; therefore when the Vessels are cool, strain and press out the remainder, and having clarify'd the Liquor, pour it into a glaz'd Earthen Pipkin, and evaporate the superfluous moisture over a very gentle fire, till that which remains be as thick as an Extract, which will be very acceptable to the taste, and somewhat Aromatical. You may also dry the Lees of the Expression, and having burnt and reduc'd it to Ashes, make a Lye with the Water; and having filter'd it, and consum'd it to the coagulation of Salt, mix it with the Extract, keeping them together in a Gally-Pot well stop'd.

The Oil and spiritous Water of Juniper-Berries, is very proper to free the Reins and Ureters from Gravel and viscous matters, which stop the passages, and hinder the Urine from having its course. They are also very useful in all cold maladies of the Brain, and in scorbutick distempers. They are good to fortifie the Stomach, create an appetite, help digestion, resist the putrefaction of the humours, and to kill the Worms in the body; as also to expel windy Cholicks, and all cold maladies of the Bowels.

The Oil is especially commended against bad Air, the Pestilence, and all Epidemick diseases; nor is it less to be prefer'd against diseases of the Matrix. The Oil is given in its spiritous Water, when it is not rectify'd, or else in Wine or Broth, from two drops to seven or eight, in the morning fasting, or a good while before meals. And you may continue the use thereof as you see occasion; as also of the spiritous Water, which must be giv'n in a lesser or greater quantity, as it shall be more or less rectify'd. The Oil is also outwardly apply'd with success in diseases of the Nerves, especially in case of contractions. The Navel also may be anointed with it in Cholicks. It may be put into the Ears, to help deafness, and noise therein. It may be also put up the Nostrils; and the Temples and Sutures of the Skull may be anointed with it, in case of Epilepsies and Apoplexies, &c.

As for the Extract of the Berries, *Helmont* had reason to cry it up for an excellent Purge, in regard it is really so, especially when its fix'd Salt is added to it; for by fortifying the Stomach and the Bowels, it gently purges off bad humours. The dose is from two drams to half an ounce, either in Bolus or dissolv'd in some proper Liquor. It is also sometimes mingl'd in Opiats, or in other opening and purgative medicines.

In the same manner you may make a Distillation of the Berries of Savine, Ivy, Myrtle, and the like.

CHAP. XX.

Of the Distillation of Wheat, Rye, Barley, &c.

THE daily use of these Grains for the nourishment of men and beasts, gives us to understand, that they contain substances as essential as subtle, and proper to be convey'd to the most hidden and secret parts of our bodies; and their ability to produce their like, which they have common with all other Seeds, persuades us, that they contain eminently, and as it were in the Epitome, all the best part of the Plants that bears them, since they produce Plants that perish every year, only are perpetuated by their means.

The Mechanicks are sufficient to justify these Truths, not only in the baking of Bread, but in the brewing of Beer. For the artificial fermentation which the Baker procures in his meal, by reducing it into Dough, with hot water and the mingling of Yest or Leven with it, and afterwards by baking the Dough in his Oven, when the parts have been well divided by ferment, is that whereby the Bread becomes agreeable to the taste, and good to eat; though it has need of the heat of the Stomach, and of its acid, or natural ferment, to produce the last fermentation, and by that, the most especial division of all its particles, that the most pure and most subtle may be convey'd to all the parts of the Body that have need thereof, and the thicker parts be expel'd into the Bowels, and by them be thrown out, as unprofitable Excrements.

As for the Beer, after the Brewers have artificially giv'n to the Grain a beginning of Germination; and afterwards join'd in one center, in the same Grain, the disposition which it had to germinate, they steep it in gross; then adding three times as much more not germinated, but steep'd as the other, they pour upon the whole first Water half boiling hot, and then cold, to separate and dissolve, as much as in them lies, the volatile parts of the Grain, and to give the whole a temperate heat. Afterwards when they have giv'n it its necessary raising, and stirr'd the whole with proper instruments, they cover the Vessels diligently that contain the matters, and leave them so for four or five days, till the vapours that rise begin to smell strong, and have a winish, subtle, and penetrating scent, which is a certain mark of a perfect fermentation. Then is the true time to distill the substances in a Vessel cover'd with a Moors-head, and to have an inflammable Spirit, charg'd with the Salt and volatile Sulphur of the Grain, and altogether as subtle and penetrating as that of Wine, perhaps equally well rectify'd. I could give a more exact description of this particular, and might also advise those that would be diligent in this part of Distillation, to be careful to provide themselves of Rain-water, falling at the time of the Equinoxes, especially the Vernal; but I thought it needless, because they may find in several Authors, especially in a Chymical Treatise of *Monsieur Le Fevre*, all the light that they have use of upon this occasion.

I will only say, that there is a way with far less trouble to separate the parts, of which Wheat, Rye, Barley, or any other Grain of the same nature are compos'd, by filling about two thirds of a crooked or bending Limbeck with the Grain which you intend to distill, and making the Distillation in a close reverberating Furnace, with a gradual fire, following the Rules of Art. For by this means you shall find in the Recipient, the Spirit, the Salts, and the volatile Oils, descended through the beak of the Cornet, intermix'd with a good quantity of the Flegm, of which you may afterwards make a rectification upon a Sand Bath in a *Mairas*, or Bottle with a long neck, cover'd with its head well luted, and by repeated rectifications procure a volatile white chrystalline Salt, or at least a Spirit very penetrating, containing the volatile Salt, which will be dissolv'd therein. Which may well happen, by reason of the great disposition which the volatile Salts have to dissolve themselves in Liquor, or else to dissipate. Thus you shall also have a volatile Oil, very penetrating, united to some particles of the volatile Salt.

You may attribute to the ardent Spirit, drawn from these fermented Grains, almost the same qualities as to that of Wine, and it may also serve for the same uses.

uses. The Salts and the volatile Spirits are very proper in all distempers where there is a necessity of cutting and attenuating hurtfull humours, and to expel them through the pores of the flesh and the skin, by sweat or insensible transpiration. They are also very useful in Epidemick diseases, as also in those of the Breast, especially in Asthma's and Pleurisies; for they powerfully loosen Flegm which stops up the conduits of respiration, and help expectoration. They dissipate also the vapours that sometimes gather in those parts, and are sufficient to produce an Asthma, without the concurrence of Flegm. They dissolve the coagulated Blood which causes the Pleurisie, provided it be given in time, and before the extravasated Blood be turn'd to putrefaction. The dose is from half a scruple to half a dram; in Wine, Broth, or any other proper Liquor. They are mingl'd also with Syrrups, or Opiats. The use thereof may be also continu'd, only giving less at a time. The volatile Oil is chiefly apply'd externally, by anointing the parts that are attack'd with Rheumatisms, or any cold pain. It serves also to recall and disperse the Spirits through the members of Paralytick persons.

CHAP. XXI.

Of the Distillation of Pulse.

AMong the severall Spirits which are to be drawn from Pulse, in a close reverberating Furnace, there is chiefly to be got a volatile Salt, more distinct, and in greater quantity, then from any other Grain appointed for the nourishment of man; and also with more ease then from most of the other parts of Vegetals, excepting from some Antiscorbutick Seeds or Roots. And I believe, that men would be more diligent in the search of it then they are, were they not diverted from it by the sight of such a quantity of fix'd Salt, as usually they draw from their Husks, when they burn them to Ashes, and when they take the same course as in extracting the fix'd Salt out of the other Plants. But if they make a serious reflection upon the various nature of Salts, and upon the great inclination which acids have to unite themselves entirely to the fix'd Salts, and upon the power which they have to stay and fix the latter for a time, I believe they would be of the same opinion with me: an opinion common with several modern and judicious Chymists; which is, that all the Salts of Plants, which Chymistry has at all times acknowledg'd for fix'd, would neither prove to be Salts, nor in so great a quantity, nor would, as they do, resist the violence of the fire, if the acid Salt of the part of the Plant, reduc'd to Ashes, together with that of the Air, and that of the combustible matters, which they make use for Ustion and calcination of the substances, did not stop the Salt naturally volatile, joining it self entirely to it, and making it capable to resist the flame. Though to speak more truly, these Salts, as united as they are, would not be so permanent against the fire, had they not embrac'd and united in their conjunction, the most Alkolliz'd or purer part of the Earth, from which they seem nevertheless to have been well separated by filtration; and if they had not taken that Earth for the foundation of their union.

We are to believe also, that the acid Salt is not altogether so necessary in the composition of all mix'd bodies, especially in the composition of Plants, that without it they can neither attain the production, growth, or perfection of their parts; that nothing can be perfect without its assistance; that this is the bond of all other substances, without which it were impossible for them to have any firmness or consistence; or that all the productions of the world would return to their ancient Chaos, if once depriv'd of this acid Salt, which they make to be the Soul and upholder of nature. But to return to our business, which is the Distillation of Pulse, without undertaking to set down the Distillation of every one in particular, I will fix upon that of Beans, which is in truth the grossest sort of Pulse, but which yields to none of the rest, as well for its subtlety and penetration, as for its abundance of volatile Salt.

CHAP.

CHAP. XXII.

Of the Distillation of Beans.

TAKE about five or six pound of Beans whole and dry, and having put them into a Cornute of Potters Earth, or Glasse environ'd with lute, so that about the third part remain empty, place it upon a close Furnace of Reverberation; and having fitted and luted it to a very large Recipient, and stop'd the Register of the Duomo, or Cover of the Furnace, kindle a small fire in the Cinder-place, enough to warm by degrees the Cornute and the Beans, and having kept it thus for a good hour, begin to kindle a fire in the Hearth-place, ordering it so that it may give no more heat then that in the Cinder-place; and having so continu'd it for a good hour, increase the fire by degrees from hour to hour, but not to excess. During which time you shall see descend into the Recipient, the watry part of the Beans, in a very great quantity; after which give a little air to the Register of the Duomo, upon the Recipient side, and increase your fire from time to time, till you perceive the great Ball to be fill'd with white Clouds, which will dissolve by little and little, and insensibly, into Liquor, the Oil and spiritous Salt part descending to the bottom of the Vessel. Then keep an equal fire for two good hours, and give a little air to the Register; after which you may open it altogether, giving a more violent fire, and at length a flaming fire, which you must continue till you perceive no more vapours in the Cornute, and that the Recipient be clear. At which time stop up the Register of the Duomo, and the doors of the Furnace, and let the Vessels cool; then, having unluted the Recipient, you shall find a great quantity of Flegm mingl'd with the Oil, the Spirit, and the volatile Salt of the Beans, which will be so penetrating, that you will not be able to hold your Nose nor your Eyes over the mouths of the Vessels. Then quickly pour out all the Liquors into a Bottle with a very long neck; and having cover'd it with its head perfectly well luted, and fitted a beak to the Recipient, place the Recipient in a Bath of Sand in an airy place, out of the Sun and far from any heat, but what is necessary to heat the Sand and the substances; by means whereof you will see the volatile Salt ascend by little and little, and coagulate it self very white and chrystalline in the inside of the head, which you must cover with a Linnen Cloth several times doubl'd and dipt in cold water, to hinder the dissolution of the Salt, which will turn into Liquor with the least heat, sooner than any other volatile Salt; so that it is a hard thing to keep it otherwise then in Liquor. But with art and speed you may take it out of the head in a white chrystalline form, and preserve it also for some time in a Bottle very well stop'd. But you must have ready another head to put on in the place of that which you take off, to continue, after you have well luted the jointures, the rectification of the substances, while you draw forth and put up the first Salt. And by that means you will receive into a little Recipient the rest of the volatile Salt, dissolv'd in some small portion of Flegm, and the most volatile oily part of the Beans, which you may separate and keep apart, while the useles Flegm and stinking part of the Oil remain at the bottom of the Matras.

The volatile Salt of Beans, is a most powerful Diaphoretick, and may pass for the most subtle and penetrating volatile Salt that can be prepar'd. It may be giv'n for the same uses, and in the same dose, as the other volatile Salts of which I have spoken, and be giv'n with success for the same distempers. The vertues of the Oil are very near the same with those of the Salt. You may give it from two drops to ten or twelve, mingl'd with fine powder'd Sugar, and afterwards imix'd in some proper Liquor. It is good to anoint Paralytick Members, and such as are attack'd with Rheumatisms; to anoint the Navel and Stomach of those that are troubl'd with the Chollick, and to kill the Worms. In diseases of the Brain and Matrix, it is good to put up into the Nostrils, and to anoint the Temples.

The Distillation of Beans gives me an occasion to relate an Experiment of my own upon this subject, to justify what I have said in the foregoing Chapter, about the fixation which happens to the Salts of Plants, by the conjunction of acids, in
the

the Ustion and calcination which is made of the same Plants, when there might be another way to preserve their volatile Salts, by separating them from the substances by Distillation. I burnt on purpose in a Crucible, and reduc'd to Ashes a pound of dry Beans, like to those which I distill'd in the Cornute, yet perceiv'd not, during the Ustion, any scent of volatile Salt, as it happens in burning Animals entire, or in their parts. Making use of a violent Charcoal fire for six hours, to reduce these Beans into Ashes, I found at the bottom of the Crucible about six drams of white Ashes, of a Salt taste, like a Lye, picquant and caustick. But making use of the same fire to burn to Ashes the sediment of six pound of Beans, out of which I had drawn the volatile Salt by Distillation, I could hardly get an ounce of Ashes, and not so white neither as the former, and of a taste much less picquant and Salt. So that I was convinc'd that there was no finding the volatile Salt in the last Beans, which was drawn off by Distillation; and that their Salt could not be so tart as the Salt of those which had not been distill'd, of which the acid and volatile Salt compos'd the chiefest substance; which makes me believe, that the strong odours that rise from Animals in their Ustion, and which is a sign of the dissipation of their volatile Salt, proceeds only from the want of acids; the small quantity whereof not being able to stop the volatile Salts, they are constrain'd to fly away, when they are expos'd to the violence of the fire.

Pease, Kidney-Beans, Vetches, Lentils, and other Pulse, may be distill'd the same way, and the same substances may be drawn from them, though they have less volatile Salt than Beans.

CHAP. XXIII.

Of the Distillation of Woods.

Woods are not only the most solid parts of Vegetals, but also those which afford the most acid Salts, as is manifest by distilling them in the Cornute; which gives us occasion to make two or three observations very considerable. The first of which is, that the acid, which they contain in great quantity, binds and fixes the volatile Salt in such manner, that it is a difficult thing to distinguish it by the scent, which is mingl'd therewith, from the acid Spirit, the Oil, and the Flegm. Whereas the volatile Salts of Animals and Beans, predominating over their acid, immediately affect the Eyes and Nose of them that unlute the Recipient, into which they are fall'n with the volatile Oil, the Spirit, and the Flegm. The second observation is, that it is harder to separate the volatile Salt of Woods in their Spirit, or acid Salt, their volatile Oil and their Flegm, than to separate that of Animals, Beans, or Antiscorbutick Seeds, from the other substances, which are drawn forth with it by Distillation, because the volatile Salt of Woods is found to be half fix'd by the acid which exceeds in quantity. Whereas in the Distillation of Animals, Beans, and Antiscorbutick Seeds, the acid is found in less quantity, than the volatile Salt. The third observation is this, that the Salt which may be drawn from that which remains in the Cornute by calcination, is not so plentiful, nor of that strength, as that which may be drawn from the like quantity of the same Wood reduc'd to Ashes, because the volatile Salt of the latter is retain'd, during the Ustion, by the acid of the same Wood, as also by that of the Air, and the substances that reduc'd it to Ashes.

CHAP. XXIV.

Of the Distillation of Lignum Rhodium.

I Begin the Distillation of Woods with that of Lignum Rhodium, otherwise Rosewood; so called, not that it bears Roses, but for that the smell of it is very like to that of Roses.

Having ras'd into small pieces a good quantity of this Wood, and having fill'd about two thirds of a little Vessel, pour upon it Rain-water or River-water, and having quite fill'd the Vessel, stop it well, and leave the substances in that condition for about fifteen days. Then put one part of the Wood and the Liquor into a Copper Vessel well Tinn'd within, and having cover'd it with a Moors-head Tinn'd in the same manner, and having luted the jointures, and fitted to it a well luted Serpentine, running athwart a Pipe of cold water, together with a Recipient, make a Distillation with a moderate fire, and continue it till about two thirds of the Water, which you put into the Vessel, be drawn off. Then having cool'd the Vessels, and separated and put up into a little Glas Bottle well stop'd, that little quantity of odoriferous Oil that will swim upon the Water, and set the same Water aside, renew and continue the Distillation of that which remains, proceeding in every thing as you did before, till you have distill'd all that you put up in the first Vessel. By this means you shall have a volatile clear Oil, of a yellow colour, the scent whereof will be very like to that which you draw from Roses by Distillation; and a Water not much different in scent and vertue from that of ordinary Rose-water.

The quantity of Liquor which is necessary to be made use of in this Distillation, makes so great a diffusion and division of the acid and salt parts, which ascend in Distillation, that you cannot discern them among the Water, either in taste or smell, though they be certainly there, but in a less quantity then if you had distill'd the Wood alone in a Cornute; which you must not do however, unless you value not the beauty and good scent of the Oil and Water, which you may draw from the Wood by this way which I have set down.

This distill'd Oil of Lignum Rhodium is esteem'd as well for its pleasing scent, as for its medicinal vertues. Some there are that prescribe it in diseases of the Mouth and Throat, as also for those of the Reins and Bladder, mixing it for those uses with fine powder'd Sugar, and steeping it in its own proper Water; making use of it as well in Gargarisms for diseases of the Mouth, as in drink, from two or three to ten or twelve drops, in five or six ounces of its own proper Water. But the chiefest and most advantageous use of it is in Balsoms, call'd Apoplectick; where this Oil agrees marvellously well with Musk, Ambergreese, and the good scent of all sort of Aromaticks, Oils, and Essences that are wont to be mingl'd with it. It is also the best Succedany that can be made use of in the place of the true Oil of distill'd Roses. You may in the same manner distill Sassafras, Lignum Aloes, Santal-woods, and the like.

CHAP. XXV.

Of the Distillation of Guaiacum.

You may proceed in the Distillation of Guaiacum after the same manner as in the Distillation of Lignum Rhodium, especially if you desire a proper Oil to give inwardly. But because this Oil is generally outwardly apply'd, and for that there is great reck'ning made of the acid Spirit which may be drawn forth by the Cornute, it is but convenient that I should shew the preparation of it.

Having

Having put into a luted Cornute about six pound of Guaiacum rasp'd, or if you please, grölly cut, yet small enough to put in through the beak of the Cornute, put it into a close Furnace of Reverberation, and having fitted and luted to it a large Recipient, kindle a small fire in the Cinder-place, enough only to heat by degrees the Furnace and the Cornute. And having continu'd it very moderately for a good hour, translate the fire into the Hearth-place of the Furnace; where after you have kept it as long, increase it by degrees, till you perceive the watry part of the Wood descend into the Recipient; then open a very little the Register of the Duomo toward the side of the Recipient, and continue and increase the fire a little, till you see white vapours come out of the Cornute like Clouds, which are a sign that the acid Salt and oily parts of the Guaiacum begin to come forth; at which time open also the Cover to the Duomo, and increase the fire more and more, till the great Recipient to look clear, by which you may guess the Distillation to be compleated. Then stopping up the Register of the Duomo, and the doors of the Furnace, and letting it cool at leisure, together with the Cornute, unlute the Recipient, and you shall find an acid Spirit, charg'd with the volatile Salt part of the Guaiacum, mix'd with a dark ill scented Oil, and much Flegm. Then pour the whole into a large Tunnel, lin'd with wet waste Paper, through which the Flegm and Spirit charg'd with the volatile Salt will pass, and drop into the Bottle out of the Tunnel; and the thick Oil will stay in the Paper, which you must afterwards set to drop into another Bottle, piercing the small end of the Paper with a Bodkin, and keeping the Oil apart for your use.

For curiosity-sake you may burn to ashes the coal of the Guaiacum, remaining in the Cornute after Distillation, and having extracted the Salt by the usual ways, separate that which is merely terrestrial, and may be well call'd the *Caput Mortuum*. But this would waste more Coal then the profit would turn to; only the Salt may be useful in Purgatives, especially in Venereal distempers.

You may also distill Guaiacum, and such like Woods by descent, and draw forth almost the same substances as by sloping Distillation, but not so pure; by putting the Wood cut into a Cucurbit, covering it with an Iron Cover, with several little holes made in it, made like the Cover of a Box, so that it may just fit the orifice of the Cucurbit; which you must afterwards turn upside down upon its Cover, and place it upon a Furnace built on purpose, such an one as I have describ'd in the first part of this *Pharmacopœa*, in the Chapter of the Furnaces. For after you have set a Recipient under the Cornute, fit for the neck of it, and carefully luted the jointures of the Vessels, and heated by degrees the body of the Cucurbit, you shall find at length in the Recipient, the Flegm, Oil, and Spirit, charg'd with the volatile Salt of the Guaiacum, in as great a quantity as by the Cornute; which you may separate in the same manner as those that went before.

You may make choice of which of these three methods you please for the Distillation of the Wood of the Hassel or Wood-nut, call'd *Corylus* by the *Latins*, by others *Lignum Heracleum*; and also of the Woods of Box, Oak, Ash, Cyprus, Cedar, and other Woods. The Oil of Guaiacum distill'd is very much applauded in Diseases of the Bladder, with an addition of Water, following the method prescrib'd in Oil of *Lignum Rhodium*. To purifie the mass of the Blood; so that some do affirm that by continuing the use of it for several weeks, from four to ten or twelve drops, in its own Water, from three or four to seven or eight ounces, it is able to expel and carry away through the pores of the skin, the Venereal venom, especially if it be not too much inveterate, without making use of Mercury, the use whereof is not always so proper. It is good for the cure of Venereal Ulcers that happen in the mouth. Some are of opinion, that the Tablets which may be made of it, are very proper to hinder people from growing over fat, and to make them lean that are too fat; continuing the use of them.

The Oils of Guaiacum distill'd through the Cornute, are never made use of inwardly, by reason of their ill scent; but outwardly they are successfully apply'd for the cure of all sorts of Ulcers, especially Venereal; to cleanse wounds, and to consume proud flesh; as also for the opening or exfoliation of the Bones, and against their putrefaction.

The Spirit of Guaiacum is Diaphoretick, by reason of the volatile Salt with which it is charg'd in Distillation. It is giv'n in Venereal distempers, and in Rheumatisms, from a dram to half an ounce; in a Glass full of the decoction of

the same Wood, or of some Cordial-water, when there is a necessity to expel by sweat or insensible transpiration, the sharp serosities which are the cause of those distempers. It is also proper for the cure of petty Ulcers in the Mouth or Gums, as well in Venereal as Scorbutick diseases. The same Spirit expels by Urine those serosities, which are not to be expel'd by the pores.

You may if you please, rectifie the Spirit and Oil of Guaiacum, over a Sand-Bath moderately hot, in a Glass Cucurbit cover'd with its head, and having separated the almost insipid watry part, which will first ascend, receive and keep apart the spiritous acid and somewhat salt part, which will succeed, and which will be attended with an oily volatile, which contains also its part of the volatile Salt, and which may be also separated and kept apart as well as the acid, and may be administered inwardly, incorporating it with fine powder'd Sugar, and mixing it in some proper Liquor.

It will be needless here to shew you the Distillation of the Rhind of Guaiacum, in regard you may proceed after the same manner, and make use of as many ways, as for that of the Wood. And though the Bark may work as efficaciously and in less quantity then the Wood, yet the vertues thereof are altogether the same.

CHAP. XXVI.

Of the Distillation of ~~Elder-wood~~. *Just*

THEY that only mind the dark colour, the bitter taste, and noisome smell of ~~it~~, may not only despise it, but have an aversion to it. But they that *Just* will take the pains to make a strict examination of all its parts, and to make an exact separation and purification thereof, will find therein qualities considerable enough to merit the pains of Artists. For they will not only find the five different substances which are usually observ'd in Vegetals, especially in Woods, but also the real marks of the existency of their volatile Salt, and the fixation of one part of the same volatile Salt with the Oil, by vertue of their own natural disposition. As you shall see in the following Distillation of ~~it~~. *Just*

Having made choice of ~~it~~, the greenest, the blackest, the most solid, the most glittering, and the biggest pieces you can get, and fill'd about two thirds of a great Cornute of Fullers-Barth, and luted it round; place it in a Furnace of Reverberation, and having cover'd it with its Duomo, and stopp'd up the Register, kindle a fire of the first degree in the Hearth-place, shutting up the doors of the Cinder-place and Hearth-place, keeping a fire for two or three hours together, or till the liquor which distills from the Cornute begin to grow acid; at which time put a large Recipient to the beak of the Cornute, and having carefully luted the jointures, increase the fire by little and little from degree to degree, giving air proportionably to the Register of the Duomo, and to the door of the Cinder-place; and you shall perceive the acid Spirits come forth of the Cornute in white Clouds, which will appear by degrees more thick, when the Volatile Salt comes to be mingl'd with them, and more still when the Oyl comes first in great quantity. During which time, open the Register at times more and more, encreasing the fire from degree to degree, to the utmost extremity of heat, opening altogether the Register of the Duomo, and the door of the Cinder-place, and continuing the same fire till no more come forth of the Cornute, but that the Recipient become clear. After which having stopp'd up the Register and the doors of the Furnace, and letting the Vessels cool of themselves, unlute the Recipient, and you shall find there the acid Spirit, the volatile Salt, the Oyl, and a part of the Plegm mingl'd together, and which have need of being rectifi'd. To which purpose, having put the whole into a Matras with a long neck, plac'd in a Sand-bath and cover'd with its head, perfectly well luted, and having fitted to it and well luted a Recipient, kindle a very moderate fire under the Sand-bath, by means whereof the volatile Salt will ascend first into the head, white and Christalline; which you must draw forth and put up close and carefully in a double glass-bottle well stopp'd; fixing and luting on another head in the place *of*

of the former. And then continuing the same fire, the spirit will ascend with the rest of the volatile Salt, already dissolv'd, and will be attended with some part of the most pure and most volatile Oyl, while the thick and unprofitable Flegm remains at the bottom of the *Matras*.

The volatile Oyl of ~~the~~ is a powerful Diaphoretick, partaking much of the qualities of those Oyls which are drawn from Animals. The Spirit partakes much of the vertues of the volatile Salt, a great portion whereof it contains. The volatile Salt is giv'n from five or six, to fifteen or twenty Grains, and the Spirit from half a scruple to one dram; both the one and the other in proper liquors. The Oyl is also giv'n from two drops to seven or eight, incorporated with fine powdered Sugar, and dissolv'd in Wine, to the same purposes, as the volatile Salt. It is highly priz'd in Oyntment, to cure Ring-worms and other diseases of the Skin.

In the mean time burn that which remains in the Cornute, and draw forth by the ordinary ways a fixed Salt, which is very good to cure open Cancers, applying it as follows. Having steep'd this Salt in Vinegar, leave it to dissolve into liquor in the Cellar; then anoint the Cancer once or twice, to fetch out the venome like a smoak; afterwards continue to perfect the cure with the distill'd Oyl, which will bring a scab or crust upon the Cancer, that will fall off of it self in five or six days, by which you may give a shrewd guess at the Cure.

CHAP. XXVII.

Of the Distillation of Fruits. And first of Gourds, Cucumbers, and Melons.

THough Fruits in their Composition, have the same Principles which we observe in all other parts of plants; the difference however which is in their qualities, and the knitting together and proportion of their substances, being as various as the substance of the plants which produce them, we cannot prescribe any Rules so certain, as to be properly adapted for the distillation of these Fruits. Trees, Shrubs, Bushes, and also certain plants produce fruits. But though the trees exceed in greatness all other Vegetals, and produce their Fruits in greater abundance, better digested, and in greater perfection. Yet there are no fruits in *Europe* so big as those produced by certain plants that dye every year, and among the rest the Round and long Gourds, whose extraordinary bigness, softness, and swift decay, and the weakness and moisture of the plants that bear them, demonstrates to us, that the principal and most abundant part of their composition consists in an ill concocted Flegm, and that they contain very little Spirit or volatile Salt, and little appearance of Oyl, but only in their seed when it is very ripe. So that as there is nothing to be expected from a mix'd body beyond what it contains, there is nothing to be hop'd for from these Fruits in Distillation, but only a clear water containing very little Spirit and volatile Salt, only enough for its preservation. And therefore it is sufficient to bruise them well; and having put them into a Cucurbit of Glass, or Earth glaz'd within, and cover'd with its head, make a distillation thereof in *Balneo Maria*, or in a Bath of Ashes with a very moderate fire, as I have shew'd before in the distillation of cooling herbs.

You may do the same thing with Cucumbers and Melons; But because the scent of the latter shews that they contain more volatile parts than Gourds or Cucumbers; you may ferment them a little, and thereby loosning the bonds of the volatile spiritous and inflamable part, will cause it to ascend first in distillation; which hinders not but that you will have after all, a very fair water, whose refreshing vertue will partake much of that of Gourds and Cucumbers. To which effect, bruise a good part of that which is fit to eat, and having fitted two thirds of a glass Cucurbit, cover it with a vessel of Rencounter well luted, and having left it to digest in a Sand-bath, or upon a Bakers oven for two or three days, lute on a glass head upon the Cucurbit, instead of the vessel of Rencounter, and having fitted and luted

to it a small Receptient, make a distillation in *Balneo Maria*, or in a bath of Ashes over a very moderate fire, separating the volatile odoriferous and ardent spirit, which will first ascend, and keeping the water apart which will succeed, by continuing the Distillation, till there remain in the Cucurbit but a third part of what you put in to distill.

The distill'd waters of Gourds and Cucumbers, the inflamable spirit and water of Melons, are us'd as well to smooth, beautifie and preserve the complexions of Ladies, as for other uses. In continual and intermitting Colerick Agues and Fevers, these waters are us'd to cool the heats, and provoke sleep, giving them inwardly; or applying them to the Forehead and Temples.

CHAP. XXVIII.

Of the Distillation of Citrons.

THe advantages which may be made of the different parts of Citrons, is the reason that sometimes we distill them all together; and sometimes only those that are proper for our purpose. The good scent, and the sharp and pleasing tast, as well of the outward rind, as of the acid part of the Citron, sufficiently shew the difference of the pure parts which they contain, and withall that their separation is not so difficult, but that you may bring it to pass by ways common enough.

You may put the Citrons cut or bruise'd into a Glass Cucurbit, filling the one half, and having fitted and luted to it a Receptient, let them macerate for four and twenty hours; and distill them afterwards in *Balneo Maria*, or in a Sand or an Ash Bath, with a very moderate fire.

Sometimes Citrons are distill'd whole, being first well bruise'd, mixing them with Pigeons, Crum of white bread, with the cold seeds and Poppy seeds bruise'd, with Borax, Allum, Milk, or other proper liquors, to obtain a spiritous water, the use whereof is to cleanse, soften and prevent the wrinkling of the Skin, as also to beautifie and make clean the complexion. The juvee of Citrons is never distill'd alone; it being sufficient for the most part only to purifie it well, when you would make use of it to dissolve Pearls, Coral, or such like pretious-stones: or make it into Syrup, Tablets, or any other Galenical composition. You may nevertheless separate the most watry part in *Balneo Maria*, or an evaporating Bath in a Cucurbit of glass cover'd with its head, and find in the bottom of the Cucurbit a juice more acid then ordinary.

As for the rind of Citron, you may use it as it is, being well cut, or else take only the outward yellow rind, pare'd off with a knife. Take either the one or the other, and put it into a glass Cucurbit and pour upon the substance Rain water distill'd till it come to be above the rind about three or four fingers; then cover the Cucurbit with a vessel of Rencontre or a meeting vessel, having carefully luted the joynures. Then macerate the whole during eight or ten days, upon a Bakers Furnace, and proceed to distillation in a bath of Ashes, or a Sand bath over a moderate fire. By which means you shall draw forth a water accompani'd with a small quantity of yellow Oil, that will swim at the top, and will be both of them very odoriferous; especially the oil, the tast whereof will be very sharp and penetrating.

The Oil of Citrons may be given from two drops to seven or eight, mixing it with some drams of fine powdred Sugar, to dissolve it in five or six ounces of its own water. This mixture must be tak'n a good while after meals, in pestilential or Epidemick distempers; and upon all occasions where there is a necessity of provoking sweats, and to expel Malignant Serosities by insensible transpiration. It is also to be commended against all cold diseases of the Stomach. There is a Balsome also to be made of it, mixing it with Oil press'd out of Nutmegs, very proper against infectious Air, as for its pleasing scent. Some commend this Oil to be used as well in Oyntments, as to be taken inwardly, against the biting of Vipers and all sorts of Serpents. To which purpose I believe it to be very useful, in regard of its great
virtue

vertue to fortifie and comfort the Noble parts; for being taken inwardly, and assisted with its water, it expels by sweat the malignant spirits, which may have insinuated themselves into the mass of the blood, through the holes which the Serpents teeth have made.

The distillation of Orenge and their parts is the same with that of Citrons.

But I cannot but admire at the proceeding of a certain German Doctor, named *Frederick Hoffman*, who in a book which he set forth at *Hale* in *Saxony*, in the year 1675. under the Title of *Clavis Pharmaceutica Schroderiana*, has made a real Dutch quarrel with all the French Nation, and with me in particular, without any ground, reason or foundation, and upon false surmises. This Doctor, and Author of a book (of which, it may be truly averr'd, that whatever is good in it, is taken out of the writings of the deceas'd Doctor *Michael*) speaking of Citron, and wanting matter, after he has repeated a Story, recited by *Athenus*, of a man that having eaten a Citron which a woman gave him, was cur'd of the bad effects of the biting of an Asp, proceeds in his 444, 445, 446, pages in these words.

The truth of this Story is confirm'd by a Student of Physick in Paris, almost mortally wounded by the biting of a Viper, and cur'd by the wholesom diet of Pome-Citrons. This Student being present in the company of several Physicians, disputing about the nature, vertues, and venome of Vipers, in an Apothecaries House, who at that time had good number of them brought him home from the adjacent parts, and mingling discourses pro and con with the rest, snatches up in his hand, as he had often times done before without any prejudice, a Viper lay'd upon the table, and having been rudely pinch'd and angered by the French Apothecary a little before, though unknown to him, thereupon the Viper handled and in wrath, turns his head, while the Student was earnest in his discourse, and gave him a wound in his right thumb, no bigger than for a small needle to enter. Whereupon the Student slung away the Viper, but never minded the wound. But within less then a quarter of an hour, dismal symptoms follow'd, as Swoonings, Convulsions, continual vomitings, looseness, gripes, and Iliack passions, with a numbness of the Extreame parts, his arm of a saffron colour swell'd and grew black and blew, and his eyes sunk in his head. Yet his thumb was least swell'd, only under the end, neither did one drop of blood trickle from the wound. This unexpected and sudden tragical mischance, variously divided the advice of the present Physicians. One was for Treacle, another for Orvietan, a third for a strong Cantenazation. The poor young Gentleman, wrack'd with pains, yet full of courage, call'd for volatile Salt of Vipers with a little Treacle; but to no effect, for he presently threw it up again: neither did Clifters do him any good, the whole frame and Oeconomy of nature being quite out of order. It happen'd by accident that a noble Forraigner, pitying the condition of the Student, gave him a Pome-Citron: which not so much by the smell but by swallowing the acid juice thereof, it is an incredible thing to relate, what present ease it gave. Presently all the symptoms ceas'd, as if heaven it self had sent a remedy from above. Though the French-men out of the accustomed vanity of their humour took little notice of it. As for the Patient, though weakn'd with his former pains, he went home to his study, and taking an Electuary, made of Confectio Hamech, and Hyacinth, and now and then eating his Pome-Citron, not only slept well that night, but soon after perfectly recover'd.

From this observation, many Phenomena's of Nature, not yet so exactly known, come to be made more plain. For from hence the nature of the poison is easie to be made apparent, how it is insus'd by Vipers into man; whether it act upon the mass of blood or upon our Archæum. What are the actions of the Archæum in producing and curing diseases; how medicaments by the benefit thereof perform their operations; and in particular how the acid juice of Citrons fixes and mortifies the venome of a Viper.

The French Apothecary, in whose house this Tragedy began, has set out a Treatise, or else somebody else for him under the name of *Charas*, entitl'd the Experiences of the Vipers of Paris, wherein he affirms that that venome acts upon the mass of the blood, fixing it and hindring Circulation, and presently after, poison like an acid, fixes the blood.

But if that were the reason, how could the juice of Limons afford such present ease? which he affirms to have a fixing power; for then the venome would be more fix'd, and by the absolute hindring of circulation, death would ensue. And therefore we affirm that the venome lies in the slimy humours contain'd in the Verticles of the teeth, beyond the known quantity, as the experience of the more curious modern Italians have made evident; such as *D. Redi* the chief Physician of Florence; which humour being drank in any Liquor does no harm; but if the fury and anger of the beast be once insus'd into it, then upon a wound

wound made by the long sharp teeth in the superficies of the body; presently the mass of blood striving to expell that unwelcome stranger, makes such a strong resistance as disturbs all the functions of the body, labouring under the Tyranny of the venome, till by assimilating to it self it have ruin'd all the substance of the spirits and vital liquors; until some remedy, by an innate quality, like this of the juice of Citron, in such a concurrence of diseases and symptoms, be found ready, having an extraordinary and supereminent quality to appease the rage of the incens'd and anger'd mass of blood.

I had transcrib'd the whole story, which I have publish'd in my book of *New Experiences upon Vipers* upon occasion of this Vipers biting the finger of a German Gentleman, and not a Student in Physick, as our new Author would have him to be; but that I thought it would swell my book too much, to insert twelve pages, which this story takes up: or if I did not think it more proper to confine my self to the most necessary remarks, which I have made upon this subject; being well assur'd, that the Quotations of my Antagonist, are false, both in reference to my book, and the truth of the Story.

He is not asham'd in the first place to attribute to the Citron alone, the cure of the Vipers biting; though we must absolutely believe the contrary, as well in regard of the truth of what happen'd upon this biting, as for the reasons which I shall enforce. Afterwards he speaks of me, saying that the Student in Physick, was at the house of a certain Apothecary, where several Physicians were met to discourse upon the nature and power of the venome of Vipers. I find I live too far off to be so well known to the Doctor as I have the honour to be to several persons, altogether as eminent for their quality, and their great reputation among learned men; and those not only at home but abroad.

He would in some measure make me guilty of the biting of the Viper, when he says that the Gentleman took up in his hand from the table a Viper, which I had incens'd and provok'd contrary to his knowledg. As if I had had a design maliciously to cause the Viper to bite the Gentleman: whereas you shall find in my relation, how much he was perswaded to let the Viper alone, and the danger lay'd before him to which he expos'd himself. However he would needs do it, to shew that he fear'd the Vipers of France, as little as the Serpents of Germany.

This author, continuing his discourse, and relating what happen'd after the biting, conceals one very remarkable circumstance, that there was no yellow matter upon the wound where the tooth had gone in: as there would have been doubtless, had the Viper had his full bite. It was cunningly done of him, not to speak of the absence of this yellow juice, since he would have that to be the seat of the Vipers poison; and then they that desire to be of his side, would be forc'd to stagger in their opinions, when they should come to know that all those symptoms happen'd without any participation of the yellow juice.

Nor is he content to conceal the absence of the yellow juice, which would destroy that seat of the poison which he endeavours to set up. For he strains by several Artifices to perswade people into a belief of the impotency and unprofitableness of the volatile Salt of Vipers, though indeed and in truth it was the only thing that sav'd the Gentleman, not only in the first symptoms that he had, but also in the latter. For in speaking of the latter, out of a design to attribute to the whole Citron, the entire cure, he multiplies the number, by adding the swelling and yellow colour, which contrary to truth, he says, happen'd to his arm; and yet the more to contradict himself he says, that the finger was not swell'd, but only toward the end.

Then speaking of the perplexity wherein the Physicians were, he asserts that among other remedies thought upon, there was a strong Cauterism prescrib'd. Whereas in the Relation which I have made, I only mention an Iron Spatula, heated red hot and held several times to the wound, to keep the pores open; and to facilitate, by that means, the transpiration of the venome: but so far was it from cauterizing, that it never touch'd the part. Which makes me wonder that a person that calls himself Doctor, should conceive such a thought and make so bad an interpretation of things.

He goes on and says, that the Patient call'd for volatile Salt of Vipers in Treacle water, and that those and all other remedies signify'd nothing. True it is, that we gave him a dram of powder of Vipers in Treacle water, and Carduus water, but having thrown up that, and all other remedies which we gave him, I propos'd to the company to give him volatile Salt of Vipers in Carduus water, believing that by

by reason of the little stay which that Salt makes in the stomach, the heat of it would send a good part thereof to the most remote parts of the body, especially there where the venome entred, that in passing through all the parts, it might work some good effect. I say moreover, that though this Gentleman presently after threw up a good part of the Salt again, yet we did not forbear to give it him every quarter of an hour; and we found, that after a manifest relaxation of the symptoms, the most considerable ceas'd after the eighth repetition of the medicine, which stay'd with him altogether; nor did I suffer the Gentleman to be carry'd home till then.

Notwithstanding all which, the Doctor, having very much despis'd the volatile Salt of Vipers, and all the other remedies which were made use of, brings a Gentleman, from behind the Hangings; and says, that in pity he gave a Citron to the Patient, and that he had no sooner tasted of its acid juice, but that he receiv'd an incredible benefit, as if (says he) that *Jupiter himself had reach'd down his helping hand*. These big words might surprize those that had not read my Book, or who, not knowing the vertue of the volatile Salt of Vipers, nor how far the strength of this Citron might extend; might perhaps be more ignorant of the nature of the Venom of Vipers. But when they shall understand, as it is very true, and as many credible persons can witness, that the volatile Salt of Vipers caus'd all the first Symptoms to cease, and that neither the Thumb nor the Arm, nor any of the other parts were swell'd, while the Gentleman was at my house; that he us'd this volatile Salt, and that the Citron was not giv'n him till he got home, and as a Medicinal nourishment among other remedies; that all this prevented not pains in his Navil; that his Eyes were not sunk, his Face pale, or his Lips swell'd; and that the swelling of his Thumb began after he had eat of the Citron; that the use of it did not prevent the spreading of the venom into his hand, from his Hand to his Arm, from his Arm to his Shoulder, and from his Shoulder to the Region of the Liver, and that it began also to gain upon the Region of the Heart, encreasing and getting ground till the morning of the fourth day, insomuch that there was great fear of a Gangren; lastly, when we shall consider, that it was only the volatile Salt of Vipers, giv'n about half a dram at a time for three or four days one after another, that manifestly defeated all the last symptoms; we have great reason to declaim against all that the Doctor has so falsely and unadvisedly averr'd, and to find fault with his want of belief, or contempt of so clear a truth.

Which they will have more reason to do, that understand the story of a Viper that bit a young man in the Chymical Laboratory of the Royal Garden of Plants in the year 1671, while I was making my publick Experiments, to justify, against all the asseverations of *Signor Redi*, that the only incens'd spirits of the Viper, did cause the venom to work at the time of the biting, and that the yellow juice of the Gums is but only a bare froth, not only very innocent, but altogether incapable of producing any bad effect; and of which I have giv'n the reasons in the Continuation of my New Experiences upon the Viper, added to my Experiences printed two years before, which are not to be gainsaid. For there you will find that I was so far from having recourse to the juice of Citron to fix the venom, according to the ridiculous opinion of this Doctor, that I made use only of the Head, the Neck, the Heart, and the Liver of the Viper, lightly boil'd upon the Coals, causing the young man that had been bitten, immediately to eat them, giving him after that a dose of the volatile Salt of the Viper; and that after I had giv'n him in the evening the like quantity of the same volatile Salt, he slept quietly all the night, not having any either of the first or last symptoms that happen'd to the *German Gentleman*; so that he return'd the next morning to the Laboratory, where he had been bitten; where all the company saw him well, and working as if no such mischance had befalln him. From whence it may be gather'd, that the venom of the Viper, being altogether spiritous, cannot be fix'd, and that only the volatile Salts, or those substances which contain a good quantity of it, are able to meet and encounter the incens'd spirits, and joining with them by a kind of similitude of substance, to draw them forth, and issue out with them through the pores of the body, by reason of the sweating which they cause, or the insensible transpiration which they procure.

Nevertheless the imposture of the Doctor had been more specious, and more nearly approaching to reason, if instead of attributing the cure of the biting of

the Viper to the acid Juice of the Citron, he had fix'd it either upon the Oil, the Spirit, or the volatile Salt of the Rind of the same fruit. For though their vertue be much inferior to the volatile Salt of the Viper, nevertheless they tend very near to the same end. And I doubt not, but that in fortifying, as they do, the Heart and Brain, they may in some measure resist the malignity of the Viperous venom; though they may not be strong enough to overcome it.

But after all the care which the *French* took for the cure of a *German* Gentleman, and the beneficial success of their management, who cannot but wonder, that a Doctor, whose conscience must continually accuse him of having averr'd things contrary to the truth, should be so inconsiderate as to say, *That the French, out of their accustomed levity, took no notice of it?* When all the Nations of the World applaud the vigilance, the judgment, and the sharp wits of the *French*; their aptness to apprehend things, and to perfect themselves in all the Sciences, their sincerity and fidelity, and their natural inclination to esteem, oblige, and serve all manner of Strangers.

Nor was it enough for this Doctor to quarrel with the whole *French* Nation in general, but he must assail me in particular; and endeavour to take from me, and attribute to another, a Work wherein no person was concern'd but my self; believing that by naming me, and abusing my Book of *New Experiments*, and insinuating [or else somebody else for him] he should be able to deprive me of the right of my own Composition, which I owe to my own labour and reflexions; as if the worthy and vertuous persons that met at my house were the Authors of my Book. More then that, not content to have invaded my privilege, he endeavours to make my Book speak that which is not there, and what I never had in my thoughts, while he would have the venom of the Viper, which I say is spiritous, to be acid; though I have declar'd against those that are of this opinion, as may be seen in my Book of *New Experiences* upon the Viper, p. 97. where I say thus, *As to what remains, there are some who have thought that these provoked Spirits, have within them a secret acidity, apt to coagulate the blood, and to hinder circulation, whence proceed mortal events. But this acid having perhaps produc'd in the mass of the blood, by means of the parts themselves that come to dissolve and disunite themselves, when they are infected with venome, and that the corruption steals into them, as into milk, which grows soure, and corrupts of it self, without the mixture of any acid; there is no necessity to look for any coagulating acid in the Spirits of the Viper, which no man dares tast to try the truth; and so much the less, for that this acid may naturally befall the blood of the bitten Animal, without seeking for it in the Viper, from whence it may be flown.* For I never writ more, as he pretends, to prove that the principal effect of Venom was to fix. But I said in the 96th page, *That the provok'd Spirits of the Viper meeting with the Blood, and Spirits contain'd in the Blood of the Animal bitten, strive and endeavour to make themselves a passage, and disturbing the particles which compose the Blood, cause a kind of coagulation or confusion, which troubles its ordinary circulation, and by that means hinders the communication of the Spirits to the principal parts, upon which depends their substance and their life. And by this privation they are constrain'd to yield, as having been either assail'd in their fortress by these provok'd Spirits, and consequently infected; or rather, because these Vip'rous Spirits are become masters of the Avenues, and have stopp'd up the passages by which the Blood and Spirits held a communication together.* I say moreover, that the coagulation which happens sometimes, and not always, in some part of the blood of the bitten Animal, proceeds rather from the disturbance which the Spirits give to the Blood, and from the stop which they make of its ordinary circulation, and by the same means from the subtler parts of the Blood, abandoning the thicker, with an endeavour to pursue their ordinary course, which the provok'd Spirits have interrupted, then from any acid; since the blood of the bitten Animal looses its colour and consistence in all the substance, so that it is but rarely coagulated, and only in some petty part, which is with more reason to be imputed to the corruption which happens to it, when it has lost its ordinary motion, then to any coagulating acid, proceeding either from the provok'd Spirits or the body of the bitten Animal.

But to the end you may understand how erroneous the opinion of this Doctor is, who without defining the nature or quality of Vip'rous Venome, and without demonstrating how, or upon what parts of the body it produces its effects, after he has only said, that this story puts us upon the consideration of several Phenomena's of Nature, yet never enlarging at all upon them, he would fain have the acid

acid juice of Citron to be able to fix this Venome; for as it is all spiritous, invisible and impalpable, it is impossible to stop it, but by substances very spiritous, and much more comfortable to its nature, than the acid juice of Citron possibly can be, the operations whereof are very slow, and the parts ponderous, and no way able to transport it self with a requisite speed to the parts remote from the stomach, especially to the extremities of the body, where the venome enter'd. I say, that then it would follow that the Vipers venome must not only be of a Salt substance fix'd or volatile, but also perceptible and to be felt, like the Salts which we daily prepare, to be stopp'd and fix'd by the acid juice of Citron; which would also fail of its effect, unless it could meet with the other in the same place. For though acids are entirely dispos'd to a strict conjunction with Salts both fix'd and volatile, they can never do it, while there is but the least distance between them and the Salts.

And because the entrance of the provok'd Spirits is usually very remote from the Center, that the Archeum cannot send the juice of Citron to the remote parts in the same condition wherein it was when it descended into the stomach; since it must be concocted, then chang'd into Chylus, from the Chylus into blood, before it can be distributed to the parts; and that the provok'd Spirits, during all this while have time and to spare to take their full progress, and to make all their destruction, before they come to the stomach, then which the juice of Citron, taken in at the mouth, can go no farther; and that the quantity of Spirits which may happen to come thither is not very considerable, though they should consist of a Salt fix'd or volatile, fit to mingle with the acid juice of Citron; I have great reason to believe that this Doctors opinion, cannot but be thought very absurd by the most judicious persons, and that all the world will have cause to wonder, that a person who would be accounted a great Doctor, and who boasts himself to have a key to the works of one of the most expert men in *Germany*, should fail in his discerning faculty, and that without any solid reflection upon the nature of Spirits or of Acid, which he would make use of so little to the purpose, he should set up things so ridiculous, so unmaintainable, and so far from likelihood and truth.

With as much reason it may be wondred, that in imitation of *Signior Redi*, he should averr, that the poison of a Viper lies in the yellow juice of the gums, and that confounding one part of my reflections, with those of that Author, which are opposite to me upon this occasion, he should start up an imagination of Anger, or a furious Idea which happening to the Viper when she bites any person with her teeth, which he relates to have three points, though erroneously, that same imagination of choler is presently enclos'd in that yellow juice, and that the bad effects of it remain as well during the life as after the death of the Viper. He would also have it, that the Archeum, perceiving a strange Enemy, becomes enrag'd, disturbs all the Functions, and renders like to it all the substance of the Spirits and vital Liquors, till recourse be made to the juice of Citrons, to which he attributes a never failing faculty, to appease and correct the deliriums of the Archeum kindl'd with rage, without explaining himself any other way either upon the nature of the Vipers venome, its operation, or upon the qualities of the juice of Citron; and never so much as arguing upon the means, by which he pretends that this should produce effects beyond its force and activity.

The Doctors anticipation in favour of *Signior Redi's* opinion, upon the juice of the Vipers and the confus'd Idea, which he borrow'd from my attributing the venome of that Animal to the provok'd Spirits, were doubtless the apparent reason that made him make a bad construction of both. I see likewise that he rather chose to spare himself all manner of pains, and by following the custome of the ancients, to say that the juice of Citron fixes the Vipers venome by an occult and potestative quality, then to make any experiment, or to examine the parts of the same juice, and of the juice of the Viper, which he would have to be the seat of the venome; or to endeavour to understand the nature of provok'd Spirits, of which he heedlessly makes a union with the yellow juice to perfect the poison. For he should have considered that the juice of Citron, has a power to corrode, and also to unite fix'd and volatile Salts, if it can but come at them; but that all its power nothing avails, when there is the least distance between it and them. He ought to have consider'd that the insipid tast of the yellow juice, its thickness, its viscosity and sliminess, manifestly declare, that there is no Salt either fix'd or volatile in it; nor that it is able to enter in at such small holes as the teeth of a Viper make; much less to penetrate,

and be carry'd with that swiftness to the most remote parts of the body bitten; I say, he ought to have been convinc'd, that such a penetration, such a rapid motion can be attributed to nothing else but to the spirits; and that only to those provok'd Spirits, of which I have spoken, we ought to impute the venome and the cause of all these mortal symptoms that follow the biting of the Viper: that the yellow juice is to be absolutely excluded, and to be lookt upon as an innocent slime in all respects, as I have made appear several times before a great number of Witnesses; and that it is a ridiculous thing to believe that the provok'd Spirits should concenter and stay with the yellow juice after the death of the Viper, or produce any ill effect. Besides, he should have consider'd, that though the yellow juice did abound in volatile Salt, or that it were altogether Salt; the juice of Citron, taken at the month, not being able to get near it so soon, nor without being very much alter'd, as it is very evident, could neither operate upon it, or make any fixation; and that it would have been better for him to have kept silence with the Disciples of *Pithagoras*, then to have oppos'd and adulterated, as he has done, the truths contain'd in my book of the *New Experiences upon the Viper*; or to have troubl'd himself to have writt'n upon matters that never pass'd through his hands, and which are altogether beyond his knowledge.

As to what remains, I have too much esteem for the *German Nation*; and in particular too high a veneration for a great number of curious and learned men which *Germany* has produc'd, and to whom all Physick is so much oblig'd, for many excellent pieces which they have publish'd, to act as this new Author has done; who that he might the better assail me, has fall'n upon my whole Nation. I believe there is no disinterested Physician in *Germany*, but will blame his behaviour, and who seeing my first and last writings upon the Viper, and comparing them with what my antagonist has so rashly affirm'd, but will confess my reply to be very rational and moderate, and that I could do no less then what I have done. I am perswaded also that a good number of the Physicians, to whom I had the honour to be particularly known in *Germany* and in several other Forraign Countries, will do me the right to undeceive those that think I have any need of a borrow'd pen, to compose those little works which I have publish'd, or which I shall publish for the future under my name.

CHAP. XXIX.

Of the Distillation of Raspis, or Framboises, and Strawberries.

THe distillation of Raspis and Strawberries is one of the plainest that is made of Fruits. For when you expect no inflammable Spirit from them, it is sufficient to take them when they are fresh gather'd, and having bruis'd them, to put them into a glass Cucurbit cover'd with a head luted on with past of fine wheat flower, and after you have fitted a small Recipient to it; make a distillation in *Balneo Mariae*, between lukewarm and boiling hot, and you shall have a water very pleasing to the tast and scent. But if you desire an ardent Spirit, you must have recourse to fermentation, which those fruits are very subject to, and without any addition, whether you draw forth and only make use of the juice, or bruise the Fruits, as I have said already. For having fill'd up with either the one or the other, two thirds of a glass Cucurbit, and having fitted and luted on to the top a vessel of *Ren-counter*, if you set the Cucurbit three or four days in Sand-bath with a moderate heat, or upon a Bakers Oven, the moderate heat will insensibly warm the substances, so as to dispose them to act reciprocally one upon the other, especially the volatile, sulphury, inflammable, and Salt part upon the Acid, so that separating it self by degrees from the more gross parts, and surmounting the Acid, it will be in a condition quite to forsake it, as well as the flegm.

You shall understand when the fermentation is at the heighth by the winy scent which

which you shall perceive when you unlute the Vessel of Rencontre. Then without loosing time, having pour'd the fermented matter into a Glass Cucurbit, and having cover'd it with its head well luted, set it in *Balneo Maria*, or in a Bath of Ashes or Sand, but moderately hot, and there will in the first place ascend a volatile inflammable Spirit, very odoriferous, which you must keep apart in a double Glass Bottle well stop'd. After which you may have some small quantity of Water, somewhat odoriferous; the vertues whereof will be much inferiour to those of the Spirit.

The Water and Spirit of Raspis and Strawberries, serves more for beautifying and preserving the Complexions of Ladies then for any other use; and yet they may be administred with success to comfort and fortifie the noble parts, especially the Heart and Brain.

You may in the same manner distill black Cherries, bruising their Stones well among all the rest, and make use of their Spirit and their Water in Epilepsies, Apoplexies, and other Diseases of the Brain.

CHAP. XXX.

Of the Distillation of VWalnuts.

THE Distillation of green Walnuts is easie enough, especially to those who following the method of the ordinary Pharmacy, after they have bruis'd them well, and fill'd a little more then half a Copper Vessel, or of the body of a Refrigerant well Tinn'd, and pour'd upon it Fountain or River-water, some three or four fingers breadth above the substance, make a Distillation of it with a continu'd moderate fire, as of other common Waters, till they have drawn out about two thirds of the moisture which they put in. But Apothecaries that are careful to prepare their medicines as they ought, are glad to go a little farther then this Distillation; for by pouring the distill'd Water upon new green Walnuts, they repeat the Distillation; and having burnt the settlement, and reduc'd it to Ashes, they extract a Salt by the ordinary ways, and dissolve it among the distill'd Water, to give it more vertue, and to make it keep the longer.

But though this Distillation be not to be despis'd, yet there is still a better, whereby you may preserve the principal parts of the green Walnuts, according to the following method: Take a good quantity of bloomings of the Walnut-tree, and having bruis'd them in a Marble Mortar with a wooden Pestle, squeeze out the juice, which you must distill in *Balneo Maria*, or in a Sand-Bath, in Vessels of Earth or Glass, and keep the Water. After which, when the green Walnuts come to half their maturity, take as many as you please, and having bruis'd them in a Marble Mortar, fill about two thirds of the same Vessels of Glass or Earth, pouring upon them the distill'd Water of the bloomings, two or three fingers breadth above the substances; then setting them to macerate for the space of four and twenty hours, make the same Distillation as of the juice of the bloomings; and keep the Water till the green Walnuts have attain'd to their full bigness, yet so that they may be soft and fit to condite, at which time take as many as at first, and having also bruis'd them, and put them into the same Vessels, pour upon them the Water of the first Walnuts, and make a Distillation of the same as before; and by this means you shall have a very good Water of Walnuts; which you may render more efficacious, if after you have reserv'd and dry'd the sediment of the Distillations, you burn them to Ashes, and having extracted the Salt, you mix it among the Water.

This Water is call'd by the name of the Water of Three Nuts, by reason of the three subsequent Distillations at three several times. It is Diaphoretick. It is accounted Cordial; and chiefly commended for the cure of intermitting and malignant Fevers. It fortifies the Stomach and Brain. It is good against the suffocations of the Mother, and against Cholicks, caus'd by wind and flegmatick matters. The dose is from three or four ounces to seven or eight.

Some

Some there are, that after they have dry'd the green Rind of ripe Walnuts, distill it with a Cornute in a gradual fire, and draw from it a Spirit charg'd with volatile Salt, and a dark colour'd thick Oil, with much Flegm; of which they afterwards make a rectification in a Matras with a long neck, and draw from it a Spirit containing a volatile Salt, and a clear purple colour'd Oil, very much commended against poison, and particularly against the Pestilence. Giving the Spirit from seven or eight drops to twenty and thirty, in the distill'd Water of Walnuts; and the Oil from two drops to eight or ten; incorporated with fine powder'd Sugar, afterwards dissolv'd in the same Water.

You may also distill in the same manner, the dry Shells of Walnuts, and draw from them substances not unlike the former; the Oil whereof is chiefly us'd to mortifie Ulcers, and kill Tetters.

CHAP. XXXI.

Of the various substances of Grapes.

THE passionate Idolatry of the Ancients, and the pleasing taste which they found in Wine, made them set up a God to be the Guard of their Vineyards and their Productions, and worshipp'd him with several Ceremonies. But they would have much more multiply'd their superstitions, if they had known all the various substances which this lovely Plant contains. For it may be said, that Chymistry draws more good, curious, and different Remedies from that Plant, then from any other mixt. body in the whole stock of Vegetals.

Nature, the Sun, Time, and something of Art concur together for the perfect maturity of Grapes: But we must make use of Vessels, Time, and Art, for the first and more gross separation of the various substances, without which they would remain in confusion, and we should receive from Grapes no other advantage then to eat them as they come from the Vine, or dry'd in the Sun; though they are useful in Physick, alone or with other medicaments, setting apart the stone contain'd in the fruit, and the woody part of the Cluster to be distill'd in a Cornute without any forerunning preparation.

It is then in the Juice of the Grapes that these various substances are at first confusedly mix'd; and of which the fermentation that happens in the Cask, makes the first division; which is of the clear liquid part, that obtains from thence the name of Wine, from the tartarous part, which sticks to the sides of the Cask, and the seculent part, which falls to the bottom, by the name of Lees. Nevertheless, the separation of these three various liquors hinders not but that they are every one compos'd of various parts, upon which the Chymists find work enough to exercise themselves, and reason enough to confess, that it is not for nothing that I have said, that Grapes surpass all other mixt bodies in quantity and goodness of Medicinal Remedies.

Experience and reason demonstrate to us the truth of this fermentation, in the reciprocal operation and reoperation of the volatile, salt, and sulphury parts with the Acid; as also in this, that from that operation and reoperation rebounds the union and preservation, and not the destruction of the pure substances; the spiritualization of those which are inclin'd to it, and the conjunction of those which are not opposite; and the rejection and separation of those that are burthenfom to them. Which is apparent from this, that the more acid parts of the Juice, having united to themselves as much of the volatile Salt as they can bear, and made together one compact and chrySTALLINE body, mixt with some terrestreity, they stick to the insides of the Vessel, and become that which we call Tartar, while the part less acid, and the most part of that which remain'd of volatile, saltish, and inflammable in the Juice uniting themselves together, and receiving into their company the watry part of the same Juice, make a composition, which is the Wine; and that by working and reworking, they cause the rest of the Earth to precipitate to the bottom of the Cask; which nevertheless retains to it self some
small

small quantity of Acid, and a considerable part of the volatile Salt, in part inflammable, as experience teaches us,

CHAP. XXXII.

Of the Distillation of VVine.

THE general reflexions which I have made upon the different substances which the Grape includes within it self, seem to me sufficient and proper enough to make such as apply themselves to the study of Chymistry to understand, that they ought to regulate their operations according to the different composition and proportion of the parts which compose mixt bodies, and according to the first separations which Nature makes of them, especially upon this occasion. I think it also fit to exhort them, never to leave off for the tediousness of the labour, nor to give over upon any ill success that may sometimes befall them; but to study the more why things have ill succeeded, in regard that many times it may prove to be their own fault.

Now out of regard to the lightness and subtlety of the volatile and inflammable part of Wine, to the quantity of Flegm that is mixt with it, and the small quantity of Acid that remains at stake with it, we must proceed more gently, and make use of other Vessels, and another sort of fire for Distillation of those parts, then for that of the tartarous part, which having much less of flegm, is half fix'd, because of the excess of its Acid; and the union which it has made with the most considerable part of the volatile Salt, which it has drawn with it, as it were for a support. Which is the reason, that we never distill Wine after the same manner as its Lee, which having less Flegm, but more volatile Salt hidden within it, requires a particular method for its Distillation. Let us then proceed to the Distillation of Wine.

Having fill'd with good Wine a little more than half a Vessel of Copper Tinn'd within, and having plac'd it upon a proper Furnace, cover it with a Moors-head Tinn'd within likewise; and having fitted and luted its Serpentine to it, with its Tunnel of cold water, and join'd and luted a Recipient to the Serpentine, make your Distillation with a moderate fire, which you must continue till the Water loose its taste, and will not burn at all. By this means you shall have a Water call'd *Aqua Vita*, the quantity whereof will not be above the sixth part of the Wine which you put into the Vessel. They that are curious may evaporate the remainder by degrees to the consistence of Honey, and draw from it through a Cornute, in a close Furnace of Reverberation, the acid Spirit, which lay in the Wine before Distillation, which will be still charg'd with a good quantity of Flegm, and attended with a dark colour'd stinking Oil, of little use. After which you may burn to Ashes that which remains in the Cornute, and extract from it a fix'd Salt by the usual way.

Aqua Vita is too well known for me to describe the vertues or use thereof.

CHAP. XXXIII.

Of the Distillation of the Spirit of VVine.

THe dearness & scarcity of Wine, is the reason that we distill less wine at *Paris*, then in any other Provinces of the Kingdom, where it is far cheaper. In the most part of which, the abundance of Tartar which is found in the Vessels, hinders not the strong wines from yeilding an excellent Spirit, and in greater quantity then the small wines, where the Tartar has not time to coagulate it self, and to harden in the Casks, which usually last no longer then the wine which you put into them, although those wines do not want their Tartar neither. For the abundance, the goodness and the beauty of Tartar, proceed rather from the reiterated Fermentations which several new wines have made successively, and for a good number of years, in strong Casks and made to last a long time, then from the soil or climate where the wine grows. In regard that the Tartar of *Germany* is altogether as good as that of *Languedock*, and which is also thicker, by reason of the largeness and thickness of the pipes which they make use of. Besides that the Tartarous part naturally separating from the wine, neither impares the strength nor the quantity of the Spiritous volatile, and inflammable part of the wine. Of which this is enough to convince us, for that the wines of *Languedock* intoxicate sooner, as having more Tartar, than those whose Tartar had not time to coagulate. However the choice of the Spirit of wine is rather to be made by its purity, then from the place where the wine, from whence it was drawn, grew: so that if you intend to have it pure, you must be careful to to purge the wine well from its flegm, and to get good natural wine and good *Aqua Vita*.

Some there are, that during the distillation, fix at the top of the vessel which contains the wine or the strong water, a piece of course paper several times doubl'd, or some piece of course cloth, through which while the Spirits pass, the flegm stops and is forc'd to precipitate back again. Others there are, that make use of a sponge dipt in oil for the same purpose. But both the one or the other are mistak'n, in regard that part of the flegm that accompanies the Spirit, will pass through the the paper, the cloth, and the oil; of which the Spirit of wine may carry with it some particles, which may alter the good properties of it.

These difficulties have caus'd the new Artists to invent a vessel, by means whereof you may have, at the first dash, a spirit of wine as pure, as if it had been rectify'd several times by those ways which I have set down; of which the trial which I have daily made, obliges me to give the description of two figures; setting aside, upon this occasion the use of the long neck cover'd with its head, which is to be refus'd, in regard of the length of time which it takes up to rectify a small quantity of Spirit.

The body both of the one and the other of these Vessels is to be of red Copper tinn'd within, having two openings, of which the biggest and the principal, being in the upper part, must be accompani'd with a neck, fit to receive exactly the lower part of the *Serpentine*; and the other opening, being upon the side a very little below the neck, must have a small neck fit to receive upon occasion one part of the *Cyphon*, or small pipe, as in the first figure, or the beak of a funnel, as well to powre in that way the *Aqua vita* into the vessel, as to draw back the flegm by means of the *Syphon*, when the water is distill'd. The *Serpentine* may be made of Latin so long as it carries but one glass head, which must clasp the upper part of the *Serpentine*, made like a Tunnel. But the *Serpentine* must be of Copper, when it carries a large Refrigerant, and it must be supported with a pillar of hollow Copper, thick and of good bigness, and strong enough to support the Refrigerant, and fortify the *Serpentine* in its windings. The Refrigerant is also to be of Copper tin'd only within-side, in that part where the vapors are to ascend, dissolve themselves into Spirit, and drop into the Recipient. I refer the Reader to the figures I have made thereof.

By this means the *Aqua vita* meeting with a close pipe, twisted and very high rais'd, and not able to ascend so high, nor with that ease as the Spirit of wine, by reason

reason of it's own weight, is constrain'd to fall back again into the Vessel whence it was first rais'd ; provided you order your fire well. And for that intent; after you have plac'd the Vessel upon a Furnace built on purpose, and of a due proportion; fill'd with good *Aqua vite* for about two thirds of the Vessel, and all the jointures of the Vessel and the Recipient being perfectly well luted, and the Refrigerant fill'd with cold water, kindle in the Hearth-place of the furnace a soft Chatcole fire, but all alike, and continue it, till the Spirit of wine cease to come pure ; which you shall know by this, if after you have burnt never so little in a silver spoon, there remain any moisture at the bottom. At which time nevertheless, having chang'd your Recipient, continue the distillation, till the water that distills ceases to burn. By which means you shall have an *Aqua vite*, which you may afterwards mingle and rectify with the rest. The Spirit of wine rectified this one time, being fix'd, not only consumes quite away, but will also fire Gun-powder being cast upon it in a little spoon. A man has also the satisfaction to rectify in this Vessel several pints in a day, without much trouble, with little care, and little expence.

Some there are that have giv'n to this Wine the titles of *Essence most subtle and incorruptible, sulphur Celestial, Bezoardick vegetal Sulphur, the Philosophers key, Raymond Lullies heav'n, The Ethereal body compos'd of water and fire, &c.* But setting aside all these encomium's, I dare affirm that this Spirit is very proper to warm and penetrate ; as also to cut, subtilize, dissolve, to cause transpiration and dissipate ill humours, making use thereof inwardly or outwardly in Distempers that require such effects. That it is a menstruum and a dissolver very proper for several uses, not only the most common, but such as Chymistry can be without. So that I may not only call it incorruptible, but able to preserve the bodies which it keeps within it self, and to resist all putrefaction. It is very successfully us'd against Gangrenes, and to remove all corruption from the parts. It opens the passages and facilitates the communication of the Spirits, and quick'ns the circulation of the blood. It is very much recommended against Rhumatismes. It is one of the best remedies that can be us'd against burnings, of which it stops the progress ; not by fixing the acid, which some would impute to the particles of the fire, though they equally depend upon the volatile Salt and acid of the substances which burn, but rather by surmounting the same acid by its quantity, added to that of the volatile Salt of the substances burnt, which the acid did counterbalance, by which the violent operation of the fire is enfeebl'd, the fury of the *Archeum* appeas'd, and nature strengthn'd.

This spirit nevertheless, though very pure to outward appearance, contains yet some particles of flegm, which you may less'n, by rectifying the same Spirit, upon the sixth part of its weight of Salt Tartar well dry'd, and putting it into the same vessel where it had been rectifi'd, after you have well separated its moisture, and distilling it over a moderate fire, till it ascend more pure. You may after that dry the same Salt again, and having pour'd upon it more spirit of Wine, distill it again as the first time, and make a greater consumption of the watry parts. For by this means you shall have a Spirit of Wine of a good scent, and much stronger than it was, to which some give the name of *Tartariz'd*. But you may make it yet more pure, by putting it into a Matras with a long neck, cover'd with its head well luted, and rectifying it again in *Balneo Maria* lukewarm, not drawing off above three fourths ; then setting aside the sediment, you may rectifie it three or four times more, still setting apart the sediment. For by this means you will have a Spirit extraordinarily pure and much more effectual than the ordinary Spirit of Wine ; so that ten or twelve drops of the latter, taken inwardly in some proper liquor, will operate more strongly and suddenly, than a spoonful of the former.

CHAP. XXXIV.

Of the Spirit of Wine Tartariz'd.

SOME persons, only regarding the outside of the title of *Tartariz'd*, which Authors have given to the Spirit of Wine, thought it enough to rectifie but once that Spirit over Sal Tartar, to give it the name of Tartariz'd. Not considering, that they could not lawfully give it that name, unless in its rectification it had carry'd off, and united to it self a considerable quantity of the most pure and volatile particles of the Tartar mix'd with it; which is not to be done but by long digestions and reiterated cohobations.

Some there are who put into a Glass Cucurbit two Pints of Spirit of Wine to an ounce of raw Tartar grossly beaten, and distill it in *Balneo Maria* with a moderate heat, till it have done ascending pure. They also applaud the rectification of the same Spirit in the same Bath, with a dram of new Tartar bruised after the same manner; and having calcin'd the residue of the two Distillations, till they become green or blew, and mingl'd it afterwards with Spirit of Wine rectify'd, they distill the whole with a more powerful fire, pretending thereby to gain a Spirit of Wine *Tartariz'd*. Nevertheless I do not understand how the Spirit of Wine should be able to carry off from these nine drams of Tartar, any thing but the Flegm, and some small portion of their Acid; considering that the Salt part which the same Acid had fix'd, neither could unite nor ascend with the Spirit of Wine. And therefore to bring your design to pass, my opinion is, that you ought to give the Wine its Ferment, and follow that method which I shall shew you, and which I have found to be the best.

Having made choice of good new Wine well fermented, and put for example four ounces in a glass Cucurbit, large and high, pour the Wine upon it little and little, whence will follow an ebullition or fermentation, caus'd by the operation and reoperation of the Acid part of the Wine upon the Sal Tartar, and of the Sal Tartar upon the same Acid. Continue pouring out this Wine by little and little upon the Salt, till the ebullition cease, which will be a sign that the Salt and the Acid are mutually reconcil'd; and then the cohobation of the Salt upon the Wine must cease. At which time, having so order'd it, that about a third part of the Cucurbit may remain empty, place it in a Sand-Bath, and having exactly luted the jointures, and fitted to its beak a small Recipient, luted in the same manner, distill the Spirit with a strong Charcoal fire, to the end the Salt of Tartar, which is somewhat slow to mount, and which otherwise by reason of its own weight would remain among the sediment, may be forc'd to rise and accompany the Acid, in the union which it has made with the Spirit of Wine; and continue the Distillation with the same fire, till there be no sweetness left in the Spirit of Wine that distills forth, or till the Flegm succeed the Spirit. At which time you must put up the Spirit of Wine in a Bottle exactly stopp'd; and believe withall, that it contains more volatile Salt of Tartar, than any other Spirit of Wine, whatever other preparation or purification, or whatever other Instruments you could use. For the Spirit of Wine that has been once well rectify'd, or charg'd with its own proper volatile Salt, and is unprovided of its natural acid ferment, or of some other near of the same nature, can never volatize with it any other Salt. But the hungry acid, that naturally resides among the other substances of green and austere Wine, is in a good condition to load it self with the volatile Salt of Tartar, which an Acid less in quantity would keep in its own bounds.

After the distillation of this Spirit, having by boiling evaporated the insipid flegm of the sediment, and reduc'd it to a consistency of Honey, you may if you please, distill it through a Cornute, according to Rule; and draw from it a Spirit accompany'd with a stinking tartarous Oil, not worth looking after; while that of the Sal Tartar, which has not been volatiliz'd, remains at the bottom, and becomes augmented by a small quantity of fix'd Salt, which lay conceal'd in the Wine, though very clean and very pure, as is evident by calcining the sediment, and extracting the Salt by the common ways. Nor is it possible to hinder the union of this Salt from
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that of the Tartar which you made use of, by reason of the conformity of their substance, no more then that augmentation; when the acid of the Wine finds any matter to feed upon, as there it happens; where meeting the fix'd Salt of the Tartar, it gathers and unites to it, and embodying it self with it, increases the quantity of it, in the same manner as if it had been only dry'd and calcin'd in the fire with it; according to the Chymical Physical Axiom, *Every corrosive is coagulated by corrosion, and fix'd in Alkali*. Nevertheless, after that, though in this operation there be a kind of combat between the volatile Acid and the fix'd Salt, and that in this conflict, one part of the volatile Acid fixes it self, and augments the quantity of the Salt of Tartar, which the same acid could not carry off the first time; however, at length it becomes victour, by the assistance of the pure Sulphur of the volatile Salt of the Wine; for it carries off, and absolutely volatilizes the fix'd Salt of the Tartar, which was before united with the Wine, if you proceed as follows:

Having well calcin'd the sediment of the first distillation, and dissolv'd, filter'd, coagulated, and well dry'd the Salt, you must weigh it, then having put it into a Cucurbit, pour upon every half ounce a pint of new fermented Wine, green, austere, and well purg'd; and having cover'd the Cucurbit with its head perfectly well luted, and fitted and luted also a Recipient to it, set in a Sand-bath, and make your distillation over a fire like to the first, proceeding in all things after the same manner, and carefully putting up the distill'd Spirit in a Bottle well stop'd. Then having again calcin'd the sediment, and extracted, clarify'd; coagulated, and dry'd the Salt, pour upon it again as many pints as there are half ounces, and distill them. Then pour more Wine upon the Salt which remains, and renew the distillation, till you perceive that the Salt which remains among the sediment be not worth the trouble of any more distillation. Nevertheless you must not believe the Sal Tartar to be the cause that so little remains, but the fix'd Salt of the Wine; though the greatest part thereof were volatiliz'd in the distillations among the Tartar. Nor is it to be doubted, but that by often reiterating the infusions of the Wine upon the sediment and distillations, the Salt may be totally volatiliz'd to the utmost grain.

But for as much as the Spirit of Wine, which has volatiliz'd and carri'd away the Salt Tartar, is charg'd with much flegm, there is a necessity of rectifying it well; which may be done according to Art in the Vessel which I use for the rectification of the Spirit of Wine, luting exactly the jointures of the head and Recipient; or else in a Matras with a long neck, cover'd with its luted head, and plac'd in a Bath of Ashes or Sand, over a moderate fire.

The smell and tast of this Tartar, gives evident and undoubted proofs of the Sal Tartar which it has rais'd and volatiliz'd, in the repeated distillations made of the Wine upon the fix'd Salts of the same Tartar. We may also very lawfully call it *Tartariz'd*, since it contains in it a true Salt of Tartar, which the Acid of the Wine has separated, volatiliz'd, and united to it self. I say, that this Spirit has a better claim to this title, then that which was but barely distill'd upon the Salt Tartar; and that if it carry'd away nothing of this Salt, it would receive no other advantage, then that of the diminution of its watry part. You may also give to this Spirit of Wine the title of *Alkaliz'd*; because it contains within it self a true Sal *Alkali* volatiliz'd; and in regard that some have tak'n this preparation for a real volatilization of Sal Tartar.

CHAP. XXXV.

Of the Distillation of Tartar.

Tartar is a substance embodied, and as it were petrify'd to the sides and bottom of the Vessel which contain'd the Wine, being separated from the Must by fermentation, which chang'd the same Must into Wine. This Tartar, thus altogether separated from the Wine and the Lee, is nevertheless compos'd of the five substances which Chymistry acknowledges in the composition of all mixt bodies;

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for it contains the Flegm, the Acid part, the volatile and fix'd Salt, the Oily and Terreſtrial, as is evident by its diſtillation. And though the union of its parts, and the ſolid conſiſtency which they have taken, be not proof againſt the heat of the fire, but they are diſſolvable not only in hot water, but in cold, (like Lime) when they have paſt through the fire; their union nevertheless is faſt enough, not to diſſolve in the Wine, which environs them in the Veſſel; where they increaſe every year by the conjunction of the Tartar of the new Wine, which is refill'd into the Veſſels, and left there to ferment.

You may make uſe in this diſtillation of raw, fair, and glistening Tartar, groſſy ſtamp'd, or if you pleaſe, pulveriz'd, waſh'd and dry'd; or elſe of Cream of Tartar; and put four pound of one of the two into a large Cornute of Fullers Earth environ'd with lute, and having plac'd it upon a cloſe Furnace of Reverberation, kindle therein a ſoft fire, and continue it ſo long till almoſt all the watry part of the Tartar be diſtill'd. After which, having fitted and exactly luted to it a large Recipient, increaſe the fire by degrees, and at length to the utmoſt degree of heat, and ſo great, that after the Recipient ſhall have been along time fill'd with white Clouds, which will diſſolve in ſmall drops, mingl'd with the Spirit, all the liquor may be gather'd together at the bottom of the Recipient, and ſhall be become altogether very clear. At which time, having tak'n away the fire, ſtopp'd up the ports and Register of the Furnace, and let the Cornute cool, you muſt unlute the Recipient, and having put two pound of Bread Biſcuit pulveriz'd, into a large Matras with a long neck, and pour'd upon it all the liquor contain'd in the Recipient, cover it with its head well luted, and having fitted and luted to it a ſmall Recipient, make a rectification in *Balneo Maria*, or in a Bath of Aſhes over a moderate fire, which you may repeat once or twice upon new Bread-Biſcuit; by which means you ſhall have a pure and penetrating Spirit, very proper for all the uſes for which it is deſign'd.

I have ſaid, that you may in this diſtillation make uſe of raw Tartar groſſy bruiſ'd; becauſe the terreſtrial part, which is uſually mixt with it, not aſcending at all in diſtillation, hinders not the volatile parts from riſing. Though they that will both pound and raſh it may, or elſe make uſe of Creme of Tartar. I alſo never put above four pound of raw Tartar into a Cornute; becauſe that by ſwelling at the beginning of the diſtillation, it might burſt the Veſſel were it fuller, and if there were not ſpace enough to give it room when it ſwells.

You may according to the praſtiſe of ſome, pour the liquor of the Recipient into a Cornute of courſe Paper moiſten'd, plac'd within a Glaſs Tunnel, to the end, that the Spirit having paſſ'd through the Paper, and the black and ſtinking Oil being there ſtopp'd, you may put them both apart in Bottles. But beſides, that in rectifications, the Spirit unites and riſes with ſome particles of the volatile Salt, which the Oil had ſeiz'd, you may have at the ſame time a volatiliz'd Oil, yellow, pure, and eaſie to ſeparate; the virtues, the internal and external uſe whereof, are much more conſiderable than all that can be expected from the ſtinking Oil, which you may reſerve.

Nevertheless ſome have pretended to affirm, that there can be no volatile Salt mingl'd with the Spirit of Tartar; alledging, that if it were ſo, ſome ebullition would appear, and ſome heating of the Veſſel when you pour an acid upon the ſame Spirit; and becauſe that does not happen, therefore there is no volatile Salt. But the conſequence is very ill ground'd; for the acid Spirit of Tartar having fix'd the volatile Salt which it rais'd; and the ſame Salt finding it ſelf overmaſter'd, and as it were enchain'd by that Spirit, which hinders its action, cannot after that ſtir up any heat or ebullition, whatever acids you lay upon it; as may be obſerv'd in the preparation of Tartar vitrioliz'd. For though the conjunction of the Oil of Vitriol with the Sal Tartar, preſently and for ſome time excite great ebullitions and much heat, as well in the matters as in the Veſſels, nevertheless theſe accidents quite ceaſe, ſo ſoon as the Sal Tartar finds it ſelf ſufficiently charg'd with the acid; nor muſt you expect after that, any ebullition or heat, whatever acids you pour upon the Salt. This may convince us alſo, that the acid part of Tartar, naturally inclin'd to unite it ſelf with the Salt, fails not to carry away with it in diſtillation, as much as it can, as does the acid part of new green Wine, of which I have ſpok'n in the foregoing Chapter. We may alſo be aſſur'd, that the Spirit of Tartar would never be a good Diaphoretick, as it is, if it did not borrow that quality from the volatile Salt, which it carries away with it in diſtillation,

The Spirit of Tartar is very much recommended, to expel from the circumference to the Center, by sweet or by insensible Transpiration, a crimonious or corroding humours, which are the usual cause of scurfs, Erisipela's, and many other diseases of the Skin. It is us'd also with success, to provoke sweats in Rheumatisms, distempers of the throat, Pleuristics, as also in venereal distempers, it produces good effects in all obstructions of the Liver, of the Spleen and all the bowells; and particularly in Cachexies, dropsies, jaundies, and stoppage of the courses. It is giv'n from one scruple, to one dram and also to two, in convenient Liquors. It is mingl'd with other Spirits, and among the rest with equal parts of the Spirit of Treacle Campher'd, and Spirit of Vitriol, which mixture is call'd by the name of simple mixture, and is commonly us'd in the Northern Countries.

For the same distempers you may make use of the oil rectif'd, and give it from two drops to eight or ten, incorporated with a little fine powdred Sugar, and dissolv'd in proper Liquors. It may be also mingl'd with oil of nutmegs, to make a balsome thereof to smell to, as well in histerick diseases, as in those of the brain and against pestilential Air.

Nor is the black mass that remains in the Cornute after distillation, to be accounted a *Caput Mortuum*, in regard that among the Earth, which is the first principle, it contains the most part of the Salt, which one part of the fix'd, in uniting it self to it; which you may save, by separating it from the Earth by leviation, filtration, and coagulation, of which you may make use as well in the corroding and dissolving of mix'd bodies, and for the precipitating those which are dissolv'd by the acids, as also for several other cases, as you may observe in the subsequent discourses.

CHAP. XXXVI.

Of the Distillation of Vinegar.

I Do not here undertake to speak of a great number of Liquors, become eagre, by natural or artificial fermentation, to which some authors have improperly giv'n the name of Vinegar. But I keep my self close to that of real Vinegar, or rather, wine become eager by the alteration of the parts, and the predomination of the acid above the rest. Nor will I trouble my self with the opinion of those, who have believ'd either without reason or experience, that the wine would not have become eager but by the total destruction and dissipation of the volatile and inflammable part. Only I will say this, Vinegar being compos'd of much Flegm, of little volatile Salt, but much fix'd, and good store of acid, both the one and the other united and mix'd with some terrestreities; yet Chymistry has ways to separate and display the existence of all the parts.

In the alteration which happens to good wine, when it turns to Vinegar of it self, the acid part having united to it and fix'd the volatile Salt of the wine, and finding it self more ponderous than the Flegm permits it to ascend first in distillation, and the Flegm last. This may be made out in pure Vinegar and not counterfeited, particularly in that of *Languedock* and *Provence*. In those Countries I say, where the Vinegar is not counterfeited, in the distillation of Vinegar, you shall be sure to draw forth at the beginning an insipid Flegm, though mixt with some very little quantity of the volatile Spirit: but at *Paris*, you shall hardly draw any distinct Flegm from Vinegar, by reason that the Vinegar-makers do so counterfeit it. Whence it comes to pass that we rather take all that ascends in distillation, then trouble our selves to deslegmate the Vinegar; and that we rather take heed that the settlement do not scorch at the end, and give the Spirit the scent of *burnt* 100.

The better then to bring your purpose to pass, fill with the best wine Vinegar that can be got two thirds of a Cucurbit of Potters Earth, able to withstand the force of the fire, and having cover'd it with its head slightly luted, place it upon a fir Furnace, and having kindled a moderate fire, and fitted a Recipient to the beak of the head, begin and continue the distillation, till you have drawn out about two thirds

thirds of the Vinegar which you put into the Cucurbit; then putting in fresh Vinegar heated before, in the place of that which you have drawn off, continue the distillation, and keep in some great bottle all the distill'd Spirit together; pouring in again fresh warm Vinegar into the Cucurbit, and pursuing your distillation, with a moderate heat, till you have a sufficient quantity of Spirit, and that the sediment increasing and thickning, constrains you to change your vessel, and to pour out the residue into a Cornute, for the extraction of the last Spirit, which will be attended with a stinking black oil, leaving at the bottom dry faces, containing the fix'd Salt and the Terrestrial part of the Vinegar.

Generally we make good provision of the first Spirit, for the great use thereof in the dissolving of Pearl, Coral, Crabs eyes, Lime of lead, and several other substances of the same nature; not to speak of the inward and external applications, in most maladies, and in some Compositions.

We separate the last Spirit from the stinking oil, by means of a Cornet or horn of wast paper moisten'd in water, as we do oil of Tartar, and use it in the dissolution of certain metals or metallick substances, which the first Spirit of Vinegar is not able to penetrate. Some give it the name of *Radical Vinegar*. The oil is good against Histerick vapours, by reason of its ill smell; but the chiefest use thereof is to cleanse Ulcers.

The mark or settlement of Vinegar we calcine in a Crucible, to separate afterwards the Salt by dissolution, filtration and coagulation; you may also if you please, turn it into Christals. Some barely dissolve this Salt in the first or second Spirit to redouble their sharpness: But they might make a more inward Union, by putting four ounces of this Salt into a Cornute of Glass, and having pour'd upon it a pound of the one or the other of these Spirits, and plac'd the Cornute in a close Furnace of Reverberation, make the distillation with a gradual fire, and reiterate cohobation and distillation, till the Spirit have carry'd away all the Salt. This Spirit is call'd *Alkalify'd*, or *Radical*, and that much more justly than the second Spirit of Vinegar, for being more pure and intimately united with its proper Salt, it is more powerful to dissolve Mettals.

We also prepare a Spirit of Vinegar with equal parts of good honey and good Vinegar, which we afterwards digest together for fifteen days in a glass Cucurbit, large and high, cover'd with its head, and plac'd upon a Bakers oven, and then distilling it after in *Balneo Mariæ*, or in a Sand-bath with a moderate heat, you shall draw forth a Spirit, which you may rectify once or twice to make it more subtle and penetrating, as also very proper for the dissolution of Pearls, Coral, and such like precious Stones.

In the same manner you may distill an acid Spirit from *Spanish* wine turn'd sowre, as also from Beer, Cider, Perry, or any other such kind of fermented sowre juices.

CHAP. XXXVII.

Of the Distillation of Sugar.

Sugar is variously distill'd; for some after they have put it into a large and high glass Cucurbit, cover'd with its head, and plac'd in a Sand-bath, make a gradual fire, soft at the beginning, and somewhat quicker toward the end; and draw forth a spiritous acid water accompani'd at length with an Oil that swims at the top, which they set apart, rectifying and separating, in an evaporating bath, the watry part from the spiritous. Others mixing the Sugar poudred with equal parts of Glass or Flint bruise'd or brok'n to pieces, and putting the whole into a large glass Cornute very well luted, and plac'd in a close reverberating Furnace, make a distillation thereof with a gradual fire, very violent toward the end, and they draw forth a Spirit and an oil mix'd with a good quantity of Flegm, which they rectify five or six times upon the residue calcin'd, to take away the scent of the fire from the Oil and the Spirit. But there is a distillation to be made of Sugar very curious and

and very profitable, and by that means to convert it, and make it ascend altogether in an inflammable Spirit, proceeding according to the following method.

Take a pound of unrefin'd Sugar, and an ounce of Beer yest, and having put them together in a barrel, or in any other wooden vessel, pour upon it eight pints of boiling water; then having well mix'd the whole and stopp'd the Vessel carelessly, leave it in that condition for four and twenty hours, at what time the substances will begin to boil, and soon after they will boil so fiercely, that they would go near to break the Vessel were it close stopp'd, or that the substances had not room enough for their quick and violent fermentation. At which you need not wonder, considering that the Sugar, containing in it a great quantity of Ferment, and having therewithall to furnish other substances, it's particles finding themselves extraordinarily mov'd by addition of the yest, and the mixture of the boiling water, bestir themselves with much more violence than substances which have less of natural fermentation to forward and redouble their fermentation. Then you must empty all the liquor into a glass Cucurbit cover'd with his head perfectly well luted, with a Recipient fix'd to it, and make a distillation in *Balneo Maria* or in a bath of Ashes or Sand with a moderate fire, and you shall draw forth an inflammable Spirit, follow'd by a Flegm, which may be separated by Rectifications. Then putting the residue into the first vessel, and pouring the Flegm upon it, cover and stop the whole slightly up; and leaving it in a Cellar for two months, make a new distillation in the first Cucurbit, cover'd with its head luted, and you shall have an inflammable Spirit which you may rectify as at first; and you will find that the two rectified Spirits put together will weigh as much as the Sugar, when it was first us'd. By which it appears, that it was all converted into volatile and inflammable Spirit.

The vertue of the inflamable Spirit of Sugar, are very near the same with the Spirit of ordinary Wine; for it equally warms, cuts, dissolves and dries. But it is chiefly us'd for diseases of the breast. It has also this peculiar quality to mix and unite it self perfectly with Aromatick distill'd Oils, which usually swim at the top of the waters, and makes them fit to be united with all sorts of Liquors. The dose is from half a dram to two, in convenient Liquor.

C H A P. XXXVIII.

Of the distillation of Manna.

I believe I have sufficiently explain'd the nature of Manna in the second part of this work, to disabuse those who have hitherto tak'n it for a kind of dew. For all that which we usually see, is nothing else but a condens'd juice falling from two sorts of Ash-trees that grow in *Calabria*, and is condens'd by the heat of the Sun, as are divers other juices and tears or gum-drops, distilling from other trees in several parts of the world. For which reason I add the distillation of Manua to that of the parts of Vegetals, and I put it next to that of Sugar, because the parts thereof are much of the same nature, and for that it contains as much or more ferment than Sugar.

There is no necessity of mixing any thing with Manna, when you go about to distill it. It is sufficient to put it as it is brought us, into a Cucurbit of Glass, leaving three fourths, or at least two thirds empty, and having cover'd it with its head very well luted, and fitted to its beak a Recipient luted in the same manner, make a distillation thereof in a Sand-bath with a moderate fire, and you shall draw forth a water almost insipid, which you are to keep apart. Then having alter'd the Recipient, and augmenting the fire by degrees, and distilling it till you can distill no more, you shall find in the Recipient an acid Spirit, which you must rectify, to take away the *Empirema*, or scent of the fire, acquir'd in the first distillation. You may also keep it apart, or mix it with the first water, to make it more efficacious, and more apt to provoke Sweats, which is one of its many properties. It is also us'd to dissolve Sulphur, and to draw from thence a tincture good for diseases of the breast.

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The water may be giv'n, reinforc'd with its Spirit, from a dram to half an ounce in the water of *Meadow-sweet*, or blessed Thistle, or in any other convenient Liquor; and the tincture of Sulphur may be giv'n from three to four, to ten or twelve drops in any Pectoral Liquor.

Manna may be also very properly distill'd in a Cornute, in a bath of Sand, with a soft fire at the beginning, then increas'd by degrees, and continu'd till nothing distill from the Cornute: then sprinkle upon the Residue the distill'd Liquor several times and repeat the distillation as often, and you shall have a spiritous water, containing all the best of the Manna, and not only an excellent sudorifick, but a wonderful specifick against all sorts of intermitting Agues, giving it at the beginning of the fit, in the same dose and in the same Liquors as the former.

You may also draw out of Manna an ardent Spirit, making use of beer yest, boiling water, and the same digestions and distillations, as for the inflammable Spirit of Sugar.

CHAP. XXXIX.

Of the Distillation of Cinnamon.

THE deerness of Cinnamon, and the difficulty to have it good, is the reason, that we do not usually distil the oil in *France*; and that many are contented only to draw out a Spiritous water, impregnated with its oily volatile Salt, because the use of it is more common, then that of the oil, which many rather choose to send for out of *Holland*, then to trouble themselves to distill it. Nevertheless I will here insert the method which is to be us'd for the distillation both of the one and the other, beginning with that of the water.

Take a pound of the best Cinnamon you can get, and having slightly bruis'd it and put it into a Copper vessel well tinn'd within, pour upon it three pints of good white wine, and as much distill'd Balm water; then having cover'd it with its Refrigerant tinn'd likewise and well luted, and having also fitted and well luted a Recipient to it; after a maceration of twelve houres, put it upon a proper furnace, and having fill'd the Refrigerant with cold water, begin the distillation with an immediate quick coal fire, to loosen the Spiritous oily and volatile Salt part, and to cause it more quickly to ascend; and continue the fire, till the water be almost inspid; keeping however apart of the first and second pint of water, which you shall distill; as also of the third which follows; as being, from degree to degree, one better than the other. Take care in the mean time to change the water in the Refrigerant every foot; to the end that the ascending vapours may the sooner dissolve into water. It will be so much the better also if the Refrigerant be not too high rais'd, to facilitate the distillation of the oily part of the Cinnamon, which cannot but with great difficulty ascend very high, no more than the oil of the most part of other Aromatics. You may make use of the last water for the distillation of new Cinnamon, instead of the Balm water which I directed, and keep the two first pints of distill'd spiritous water each of them apart or mix'd together.

The Spiritous water of Cinnamon is good, speedily to comfort and fortify the more noble parts, and principally the heart. For which reason it is giv'n with success in swooning and fainting fits. It excites the natural heat of the Stomach, it helps digestion, stays looseness, expells wind, and eases Coliques, which are caus'd thereby. It is much commended also to facilitate the birth, to strengthen women in labour, and to ease their pains. It is also very good to provoke the Courses, and to expell the vapours that rise in the Matrix. It is giv'n alone from a quarter of a spoonfull, to a spoonfull when there is any necessity. But it is better to keep to the lesser dose, especially when you take it oft'n.

To distil the oil, after you have made choice of a pound of excellent Cinnamon, slightly bruis'd, and put it into a Copper Vessel well tinn'd, moist'n it with a little good whitewine, and pour upon it six pints of Fountain water. Then having cover'd

ver'd the Vessel with a Refrigerant well luted, let it stand and macerate till morning, and then make the distillation, observing the same method in all things as in the distillation of Cinnamon-water, only that there will be no need to keep the distill'd water apart, and that you must take away the fire when the water is almost insipid; at which time let the distill'd water cool and settle, and separate from it that Oil which will be saln to the bottom, putting it up in a glass Bottle perfectly well stopp'd. Then having press'd and strain'd out the residue in the Vessel; and put in the room thereof a pound of good new Cinnamon slightly bruis'd, pour upon it not only the distill'd water which you separated from the oil, but also the liquor press'd out of the sediment; and having cover'd the Vessel with its Refrigerant, and proceeded in all things as in the first distillation, you shall find at the bottom of the distill'd water, a little more oil, which you must separate and put very carefully. You may then squeeze the residue again, put new Cinnamon into the Vessel, and pour upon it the distill'd water and the squeezings, and repeat maceration and distillation in the same manner as before, and renew the same operation for several times one after another, and you shall have every time more and more oil; because that the water which is once sufficiently charg'd with the oil, more easily permits that which it has rais'd with it in distillation to precipitate to the bottom. You may also make use of this distill'd water instead of that of Cinnamon. But if after you have put it into a Glass Bottle well stopp'd, you expose it for some days to the Sun, if it be Summer, or upon a Bakers Oven at another time, you shall find some small quantity of Oil, which will be precipitated to the bottom.

Some there are, that for this distillation would have you to put among the Cinnamon, about an ounce of Niter, or Sal Tartar, or raw Tartar, believing that the Salts, by piercing the Aromaticks, will separate a larger quantity of Oil from the terrestrial parts. But as I have said before, the great dispositions which the Salts have to unite with the Oils, rather occasions a diminishment then an augmentation of the Oil.

The virtues of the Oil of Cinnamon are much the same with that of the Spiritous Water. Nevertheless it works in a less quantity, being of a substance more pure, more subtle, and more substantial. And therefore you must not give above one or two drops at a time. It is also more proper then the Water to mix in Opiats, Tablets, and Pills, and many other solid medicines; and among the rest in odoriferous Balsoms, to be carried in the Pocket; though it is mix'd sometimes in liquors, being incorporated with a little fine powder'd Sugar, or dissolv'd in some small quantity of the inflammable Spirit of the same Sugar.

CHAP. XL.

Of the Distillation of Cloves.

THE Clove is not so dry a substance as the Cinnamon; it contains also much more Oil, as you may perceive by bruising it, but much more by distilling it, which may be done much after the same manner as Cinnamon. But the best way is to make a kind of putrefaction first, to make a more intire dissolution of the parts of the Clove, and to make the volatile Salt and oily part more apt to leave the terrestrial part. But you must not observe the same method for the distillation of Cinnamon, whose subtle parts being much less in quantity, and much more subject to dissipation, will not endure a long maceration, without a notable diminution of their quantity, and a great alteration of their proper substance.

Take for example a pound of Cloves, and having grossly bruis'd them, and put them into a glass Cucurbit, and pour'd upon them four pints of Fountain-water lukewarm, cover the Cucurbit with a Vessel of Rencontre, perfectly well luted. Then having put it twelve or fifteen days upon a Bakers Oven, unlute the Vessel, and pour the substances into a Copper Vessel Tinn'd within, cover'd with its Refrigerant; and having plac'd it upon a proper Furnace, and having exactly luted all

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the jointures, as also those of the Recipient, make a distillation with an immediate quick Coal-fire; shifting as occasion requires, the water of the Refrigerant; and continue it till you have distill'd about two thirds of the moisture which you put among the Cloves. After which, letting the Vessels stand till they are half cold, separate by inclination, the spiritous Water that swims above the Oil in the Recipient; and having put up the Oil in a strong Bottle well stopp'd, unlute the Vessel, and pour the distill'd Water upon the remains; then lute on the Refrigerant again, and renew the distillation as before. By this means you shall have a certain quantity of Oil, which the first distillation could not raise, which you may add to the first, keeping the distill'd Water apart for other uses.

You may also, after a maceration of the powder of Cloves for twelve or fifteen days, make a distillation thereof in a Glass Cornute, plac'd in a Sand-Bath over a moderate fire; and having made the same separation of the Oil, and the same cohobation of the Water upon the residue, make a new distillation, to the end you may save all the Clove contains of volatile oily Salt.

Some there are, who never adding any moisture to the Cloves; but having grossly beaten them, and put them into a glass Cornute, distill them in a Sand-bath, with a gradual fire, and extract from thence a spiritous water, and a volatile salt Oil. But the *Empyrema*, or fierce scent and quality which the Oil contracts this way, is the reason that this method is not so much observ'd.

Nevertheless, Cloves may be distill'd by descent to very good purpose, if after you have stretch'd a fine Linnen Cloth upon a large glass Tunnel, plac'd upon a proper big-bellied Viol, and fasten'd it round about the Tunnel, and spread about an ounce of powder of Cloves, upon the Cloth, you cover with ashes the hollow of a Silver or Latten-plate, proportionable to the mouth of the Tunnel, and having put upon the ashes the live embers of a small quick fire, squeeze the bottom of the plate upon the powder of Gillowflowers. For by continuing to lay a few fresh Coals upon the ashes that lye in the Plate, the Oil and spiritous Water of the Cloves will distill by little and little into the Viol, and the powder will remain dry and insipid upon the Cloth. After which, having put fresh powder upon the Cloth, proceed in the same manner as before. And you may continue this operation by making use of several Vessels at a time, till you have as much as you desire.

You would have but very ill success, should you distill Cinnamon in the same manner, whose subtle and volatile parts would dissipate, instead of falling down, and leave nothing but some few drops of insipid water.

Oil of Cloves is very much commended to fortifie the heart and the brain, and all the noble parts. It is giv'n with good success in cold diseases of the stomach, and the intestines, in those of the matrix, as also to hasten the circulation of the blood, and to ease those that are troubl'd with the Scurvy. It is giv'n from one to two or three drops, incorporated with fine powder'd Sugar, and steep'd in some proper liquor. It may be also mingl'd in Bolus's, Pills, Opiats, Tablets, and several other medicines. It may be also us'd in odoriferous Balsoms, and so anoint the stomach, having incorporated it with press'd oil of Nutmegs. Dipp'd in Cotton it is put into rotten teeth to assuage the pain. The spiritous water of Cloves may serve almost the same uses, giving almost the same dose as of the spiritous water of Cinnamon.

Nutmegs and Mace may be distill'd in a small Copper Vessel Tinn'd, and cover'd with its Refrigerant, proceeding as I have directed in the first distillation of Cloves. But the small quantity will neither pay for the Spice nor the workmanship; beside, that it is more easie and more beneficial to extract those oils by the Press, without any farther trouble. Nor need I trouble you with those preparations here, having already giv'n directions in the *Galenick* preparations.

You may also in the same manner distill with a Refrigerant Cubebs, Amomum, Cardamums, Pepper, and such like Aromaticks.

CHAP. XLI.

Of the Distillation of Camphire.

THOSE Authors who have written of the Distillation of Camphire, have labour'd and taken a great deal of pains, in my judgment, altogether in vain. For out of the hopes which they had to be able to prepare something better than what nature had perfected, after they had toil'd themselves without success, yet being willing to make the best of a bad Market, they put to publick view distillations hardly to be maintain'd. And I think they had done better, not to have undertaken to distill it, in regard that as it is brought to us, it surmounts in purity, subtlety, volatility, and penetration, all that can be extracted by distillation, whatever care, skill, mixture, or whatever Vessels they can make use of. Its transparency and whiteness equalling that of Snow; its sharp and picquant tast, its extraordinary strong smell, its volatility, its quick dissipation, its inflammability in the very water, and its total consumption of its self, without leaving any fæces in the Vessels where it is set on fire, sufficiently testify the purity and the subtlety of its parts. So that we may safely say, that all the inventions of Chymistry are not able to enhance the purity or the perfection which nature has giv'n to Camphire; nor to separate any gross part; and that the greatest kindness we can do it, is to leave it in its own natural condition, and not to bestow upon it any preparation, which will but destroy or alter its good qualities.

For if the distillations which Authors have propos'd, be well examin'd, it will be found, that after the inevitable dissipation of the greatest part of the Camphire intended to be distill'd, and after a considerable expence, as well for the substances as for the Vessels and the fire which must be us'd, that which shall be distill'd, or if they so please, rectify'd, shall not come near those perfections which the Camphire had before distillation. For which reason I thought it needless to give any directions in it. It being enough for me to tell those that desire an oil, or oily liquor from Camphire, that they must dissolve it in oil of sweet Almonds, or in Spirit of Wine or Turpentine, which may be done in a Matras perfectly well luted, plac'd in *Balneo Maria*, or in a Bath of Embers, over a very moderate fire. Nevertheless pure Camphire will work more efficaciously, then all these liquors.

Some make use of *Aqua Fortis*, or Spirit of Niter, to turn the Camphire into an oily substance, which swims above the Spirits. But this preparation is not at all to be regarded; for besides the violence of these corroding Spirits in dissolving the Camphire, they convey a great quantity of their particles into it; the acrimony whereof is too much to be suspected, especially when it is to be giv'n inwardly.

Camphire is very much esteem'd in times of contagion, as also to resist ill air, and the putrefaction of humours. It is very good against the vapours of the Matrix, as well rak'n inwardly, as held to the nose, or dissolving it in Clysters. The ancients believing it cold, commended it to extinguish the heat of lust, and to hinder generation, which occasion'd the Proverbial Verse,

Camphora per nases castrat odore maris.

Camphire but only to the Nostrils held,
By scent alone the lustful Male doth geld.

But because sence and reason manifestly convince us, that it is hot, we must absolutely impute all the effects which it produces, to the subtlety and penetration of its parts. The dose is from one grain to three or four, beaten first, and dissolv'd as it were in a little Spirit of Wine or Oil of sweet Almonds, then steep'd in some proper liquor. It is also mingl'd in hysteric Clysters, from three or four grains to ten or twelve. It may be put also about a grain into hollow teeth, or else dissolv'd in Spirit of Wine for a Gargarism, to ease the pain of the tooth-ach.

CHAP. XLII.

Of the Distillation of Turpentine.

I Will not undertake to set down here in particular, all the different methods of distilling many sorts of Gums, in regard that the distillation of Rosin, which is aliquid Gum, may suffice for all. Take, for example, two or three pound of Turpentine, and having put them into a large glass Cornute, plac'd in a Sand-bath, and having fitted a well luted Recipient to it, begin the distillation with a moderate fire. So shall you presently draw forth an acid Spirit accompany'd with water, and an ethereal volatile inflammable Oil, very clear, to which will succeed another of a pale yellow, and by and by another of a perfect yellow, and lastly another which will be red. You may if you please receive all these Oils apart, and put them up in several bottles well stopp'd. But if you make use of a long bottle for a Recipient, without changing it till the end of the distillation, you shall perceive all these Oils as it were swimming one above another; of which the red at the bottom shall be surmounted by the yellow, the yellow by the Lemon colour, the Lemon colour by the white, and the white at length by the ethereal, provided your fire be rightly order'd. These Oils have very near the same vertues, but they operate more or less, according to the degree which they keep higher or lower in the Recipient, and according as they are paler or deeper colour'd. The lowest degree, which the deepest colour'd keep in distillation, being a certain sign of the weight of their substance, and their inability to imitate the activity and penetration of those that keep above.

You shall find in the lowest part of the Cornute the thickest part of the Turpentine, which is that which some Authors call *Colophonium*, from whence you may extract the very hindmost acid Spirit, increasing the fire, and at length a dark colour'd Oil; but it will be better to let it alone, and to keep that *Colophonium*, and to make use of it in Ointments and Emplaisters, and other external remedies.

Some there are, that in the distilling of Turpentine, mingle water with it; others cover it with fine Flax, to hinder its swelling, and to prevent it from running into the Recipient through the beak of the Cornute. But there is no need of being so cautious, provided your fire be well order'd, especially at the beginning of the distillation.

The volatile Salt of Turpentine, which lies conceal'd in the acid part of the Ethereal Spirit, and in the Oils which come forth first of all, contribute very much to the vertues which are attributed to them, the principal whereof are to open the passages of the Urine, to temper the heat thereof, to prevent the breeding of the Stone, and to stop Conorrhœa's. It is also very much commended in all diseases of the Breast; in those of the Stomach, Liver, and Spleen; as also to dissolve inward Contusions, which come by falls, and to heal wounds and internal Ulcers. Outwardly they are apply'd for the cure of Fistula's, Chops, and Ulcers of the Lips, Nipples, and Fundament, as also of all sorts of wounds, particularly of the Nerves, and to cleanse and heal Ulcers, as well old as new, dissolve Contusions, assuage pains, and dissolve swellings. It is commended also against deafness, by putting some drops into the Ears.

CHAP. XLIII.

Of the Distillation of Mastich.

Some there are that would perswade you to mingle with Mastich equal parts of the powder of Flints, together with a little Salt, and the help of a Cornute, with a gradual fire, to draw forth a white liquor, a yellow oil, and at last a red oil; which they would have you afterwards to rectifie in a little Cornute, and separate the dark colour'd oil, that will remain at the bottom after rectification.

Others mingle with the Mastich Bole Armonaick powder'd, and having made a paste thereof with the Spirit of Wine, and then leaving it to macerate for fifteen days, distil it through a Cornute with a naked fire; and having drawn out a volatile Oil that will swim above the other liquor, and a heavy Oil fall to the bottom, rectifie it again upon new Bole Armoniack and new Salt.

Some there are that after they have fill'd two thirds of a Cornute with Mastich in powder, and pour'd upon it as much Spirit of Salt, as is sufficient to moisten it well, distil it through a Cornute in a Bath of Sand, with a gradual fire well govern'd; and first they draw forth a little Flegm, afterwards a fair and clear Oil, mingl'd with the Spirit of Salt which shall be distill'd; after that a yellow one, and lastly a red Oil. They also keep every one of these liquors apart, and rectifie them afterwards.

Some there are, that after they have drawn forth a tincture from the flowers of white Mullein, and St. Johnworts, with Spirit of Turpentine, leave it to digest fifteen days upon the Mastich, altogether as heavy as the tincture, and having drawn forth that Spirit by the help of a Sand-fire, and cohobated the same two or three times upon the Mastich, and at length chang'd the Recipient, they draw forth a yellow Oil, and in the last place a red; and then having calcin'd the mark or sediment, extract a Salt from thence, which they mingle among the Oils.

Now you have the liberty to choose which of these distillations you like best, or to invent any other. For my part I think the best way is, to follow the same method for Mastich as I have set down for Turpentine. For as much as if you govern your fire well, you shall have first a watry liquor, a little acid, accompanied with some particles of volatile Salt; after that yellow Oil, and lastly a red one, which will have no need of being rectify'd, and which without all that trouble, and altering the qualities of the Mastich by the mixture of strange substances, will contain the most essential part of the Gum, and which will be most able to second the design of your distillation.

The distill'd Oil of Mastich is very much commended in weakness of the Stomach, and looseness of the Intestines; to heal and consolidate wounds and Ulcers as well of the Lungs as also of the Breast, and other inward parts of the body; to stop up the orifices of the Veins and Arteries, and to stay all losses of blood. It is given in proper liquors from four or five, to twelve or fifteen drops. It is also outwardly apply'd as well upon the Stomach as upon the belly, to second internal remedies, as also in wounds of the Nerves, and all the other parts, to consolidate and heal them; making use of it also by way of injection, among vulnerary decoctions, when the wounds are very deep. It is also made use of by way of unction, to fortifie the members, and in fractures and dislocations of the bones.

Ordinary Rosin, Black Pitch, Olibanum, Gum Elemmi, Sandarach, Tacamahacca, Sarcocolle, Euphorbium, and the like, may be distill'd in the same manner as Turpentine and Mastich.

CHAP. XLIV.

Of the distillation of Benjamin.

CONsidering the Roffony substance of Benjamin, an Artift, would be apt to regulate his diffillation according to that of other Roffins; but its pleasing ſcent, and the delicacy and volatilenefs of its principal parts require particular cautions. For if you be not very exact, you will rather cauſe a deſtruction, then a legal preparation. They that would bring their buſineſs to paſs muſt proceed this way.

After you have put a pound of good Benjamin powdered, into a large Cornute of Glaſs, the neck whereof muſt be of the longeſt and largeſt ſize, pour upon it three pints of good Spirit of Wine, ſtirring them and incorporating them well together: Then having fitted and luted to it a Veſſel of Rencounter, keep the Cornute for four and twenty hours, with the neck upright, upon a Bakers oven, ſtirring the ſubſtances from time to time, to haſten the diſſolution of the Benjamin in the Spirit of Wine. After which, place the Cornute in the Sand-bath, fitting to its beak, inſtead of a Veſſel of Rencounter, a half Ball luted, with a wet Veſſel, and with a moderate fire diſtill firſt the Spirit of Wine, after which the flowers of Benjamin will riſe; but as ſoon as they appear, ſet a new Recipient, well dry'd, in the room of the former, and lute it ſlightly, that you may be able to draw out from time to time, the flowers that ſhall fall into it, as alſo thoſe which ſhall ſtop in the neck of the Cornute, putting up thoſe Flowers in a glaſs bottle well ſtopp'd, and then putting the Recipient into its place again. But then lute it up very exactly, when you ſhall perceive a thick liquor to diſtill from the Cornute, which will be the firſt oil of Benjamin, which you ſhall diſtill with the ſame fire: which if you continue, you ſhall have an acid liquor, and after that a yellow clear and odoriferous oil, and then the laſt oil greaſy and thick.

Theſe are the ſubſtances that are to be drawn out of Benjamin by diſtillation. Yet are they not many times deſir'd altogether at one time. For ſometimes it may be enough to have the Flowers or the tincture: they that deſire only the Flowers, may ſublimare them with little trouble, putting in two or three ounces of Benjamin powdered, into a long pot of potters earth, plac'd in a Sand-bath, and cover'd with a long Cornet of thick paper, the mouth whereof muſt be proportionable to the circumference of the pot. For having ty'd and faſten'd the bottom of the pot round about with pack-thread; the heat of a moderate fire, which you muſt kindle under the Sand-bath, will cauſe the light flowers of Benjamin to riſe, and ſtick to the inſide of the Cornute, white and ſlimy like Snow, and in long Cryſtal pointed drops; the ſcent whereof will be as ſweet and delectable, as the ſubſtance ſubtle and penetrating, and which may be truly call'd the true volatile ſulphur'd Salt of Benjamin.

Neither is the preparation of the tincture of Benjamin ſo very difficult, ſince you may find it in the diſſolution of Benjamin made in the Spirit of Wine, before diſtillation. For having pour'd out by inclination that diſſolution, and put it up in a glaſs bottle well ſtopp'd, you may call it the true tincture of Benjamin.

It may be ſaid, that this tincture contains all the good parts of the Benjamin, which the Spirit of Wine has diſſolv'd, and that the ſcæces that remain at the bottom, are only ſome ſtrange bodies which the Spirit of Wine could not diſſolve. We may be ſure alſo that the Spirit of Wine which riſes firſt in the diſtillation of Benjamin, fails not to carry off ſome particles of the volatile Salt of the ſame Benjamin, with which the ſulphury part has a particular congruity, as you may perceive by its good ſcent, and by the good effects which it produces, being tak'n inwardly, from half a dram to two drams in proper waters or decoctions, eſpecially when you would provoke ſweating; or make uſe of it for a Coſmetick inſtead of the Tincture, for it cleaſes, ſcowres, and penetrates better then that. You may alſo diſſolve in this Spirit, the Flowers, and buttery ſubſtance of Benjamin, which is much of the ſame nature with the Flowers, and draw from thence a tincture, more pure ſubtle, and which will work in a leſs quantity then the ſimple tincture of Benjamin, or the Spirit of Wine drawn out of it. There is no doubt alſo to be made, but that the Flowers of Benjamin are the moſt eſſential part of it; and that the prin-

principal vertues expected from them are, as well to subtilize bad humours, and to expell them through the pores of the Skin, as also to cut, loos'n and expell by the ordinary ways those which are thick and viscous, and particularly those of the breast; giving these Flowers from three or four grains, to ten or twelve in convenient liquors, or mixing it with Trochick Looches, or other pectorallremedies. It is also mingl'd to good effect in odoriferous compositions. For which purpose the yellow oil is principally made use of, which comes forth after the acid part. As for the greasy thick oil, that comes last of all, it is only fit to cleanse and consolidate old Ulcers. Nor would it be worth looking after, but that it follows the other substances, with little expence.

Storax may be distill'd in the same manner, as Benjamin.

CHAP. LXV.

Of the distillation of Myrrh.

Myrrh being a rosiny Gum, the watry parts whereof counterballance the oily, requires a method altogether particular for its distillation. Which that you may the better effect, having made choice of and beaten very small a pound of that Rosiny Gum, and put it into a large glass Cornute, pour upon it four pints of good *Aqua vita*, stirring them together at that instant, and from time to time, during a maceration of twelve hours. After which having plac'd the Cornute in a Sand-bath, and fitted and luted a half ball to it, begin your distillation with a very soft fire at the beginning, encreasing it by degrees, and especially toward the end, the better to draw forth all the oily part of the Myrrh, setting aside the Spirit that will ascend first in distillation, and reluting afterwards the half Ball, to receive the rest of the distillation. When all is thus distill'd, and the vessels are cold, having separated the superfluous moisture of the *Aqua Vita*, from the oily part of Myrrh, and incorporated the latter with the same weight of Vitriol calcin'd to whiteness, you shall rectify it into a little glass Cornute, in a Bath of Sand, over a very moderate fire, and you shall have an oil less thick, and much more pure than it was before; by reason that the vitriol retains the more thick and earthy parts. But because the Vitriol fails not to impart some Acrimony to that oil, and that it is not so pure as may be desir'd, mix it with its weight of the bone of an Oxe or Sheep calcin'd into powder, and four times as much Fountain water, and having put them together into a glass Alembick all of a piece, and having fitted and luted to its beak a little Recipient, in a Sand-bath over a moderate fire, you shall draw forth a yellow clear oil, and very proper for all its uses, which are chiefly to kill the worms, resist venome, and the putrefaction of humours, to open obstructions of the Bowells, and particularly those of the Matrix. It is giv'n from two or three drops, to seven or eight, incorporated with powdred Sugar, then dissolv'd in its proper Liquors. It is also mingled in Pills, Opiates, and other Medicines.

There are some that think it enough to dissolve Myrrh in *Aqua Vita* or in Spirit of Wine, and to draw forth an extract of that juice, after they have filter'd it.

I have set down the preparation of oil of Myrrh by a mistake among the Galenick oils.

CHAP. XLVI.

Of the Distillation of Gum Ammoniack.

THE name of Ammoniack was given to this Gum from the temple of *Ammon*, where the ancient Heathen went to consult the Oracle of *Jupiter*, as being the natural place where this Gum grew. The watry and-viscous substance whereof requires a particular method, not much unlike to that of Myrrh,

According to the opinion of some, you may very well mix Bole Armoniack, Brick, and powdered Flints with Gum Ammoniack, Galbanum Oponax and other watry Gums of the same nature, before you put them into the Cornute to make distillation. But though these Gums do easily swell in the Cornute, when the heat of the fire presses them more then they can endure, by which means they may probably get into the beak of the Cornute, and drop into the Recipient: nevertheless, they may be distill'd without any such mixture, or without any such fear of ill success, provided you proportion the fire and vessels to the quality of their substance.

They that have Furnaces and Vessels proper whereon to place a Cornute, and to make distillation of the ingredients, by means of a hot air enclos'd, may make use thereof to good purpose upon this occasion. But because all men have not these conveniences, the same thing may be done by other means, as in *Balneo Maria* mix'd with Saw-dust, the Cinder-bath or Sand-Bath, provided you govern your fire, and that your Cornute be big enough.

Put then a pound of Gum Ammoniack into a glass Cornute, large, deep, and fit to contain eight or ten times as much of the same Gum. Take which of the baths you please, and having plac'd the Cornute upon it, and fitted and luted a large Recipient to its beak, begin the distillation with a moderate fire, till you see the work of the distillation very far advanc'd; and that all the danger of the swelling of the Gum be over, at which time you may by a little and little increase the fire, and at length make a violent fire to make the last oil of the Gum descend from the Cornute into the Recipient, concluding the distillation when the Recipient is absolutely very clear. Then letting the Vessels cool, and having unluted the Recipient, you shall find an acid Spirit containing the volatile Salt of the Gum, mix'd with much Flegm together with a thick stinking oil. Of all which substances you are to make a Rectification, pouring them upon a pound of bones calcin'd into powder, and put into a glass Cucurbit, which is to be cover'd with a head well luted, and plac'd in a Sand-bath over a very moderate fire. For by this means the more gross parts of the Oil, and the more watry parts of the first Distillation will remain at the bottom, while the pure and volatile substances rise up to the head, and drop from thence into the Recipient. You may also make another Rectification upon new bones calcin'd into powder, of the whole Distillation, and at length separate the distill'd volatile Oil from the spiritous part, wherein you will not fail to meet with the volatile Salt of the Gum, provided the Vessels were carefully luted in the first distillations, and both the Rectifications.

The Spirit of Gum Ammoniack is very proper to open obstructions of the Liver, Spleen, and all the bowels; for which reason it is with success made use of in dropsies, Ictericall distempers and Cachexies; as also for stoppage of the Urine. But particularly in diseases of the matrix which proceed from the retention of the menstruums, and the obstruction of the Vessels. It is giv'n, after general remedies, in the morning fasting from five or six to fifteen or twenty drops, in white wine or some other proper liquor continuing the use, as occasion shall require. The oil is giv'n for the same purposes, from two drops to seven or eight, incorporated with powdered Sugar and then dissolv'd in some proper Liquor. It is giv'n in all sorts of Colicks, as well to be swallow'd down as in Clusters, wherein it may be mix'd from eight or ten, to twenty or thirty drops. It is good also to facilitate the birth, and by anointing the nostrils to suppress the evaporations of the Matrix, for which purpose you may use the oil which is not rectified.

CHAP. XLVII.

Of Chymical Tinctures of Vegetals.

Chemistry gives the name of Tincture to the extraction or separation which is made of the colour of one or more mixt bodies, and the impression which it makes in any liquor or proper menstruum. This extraction or separation of colour, contains with it a portion of the most pure substance of the mixt body, which having quitted its own proper body, has dissolv'd and united it self to the menstruum, and has imparted to it its colour and its virtues. Tinctures of Vegetals are very common in *Galenick Pharmacy*. But they are never prepar'd but just when they are to be us'd. Or if you would keep them any time, fill them into Bottles fill'd up with a little Oil, to prevent the air from getting in. But the end of Chymical Pharmacy being to make preparations more pure and durable, then those I have spoken of, makes use of menstrooms less subject to corruption, and makes choice of them in such sort, that they may have some correspondence with the substance out of which you would draw the Tincture; and that she may be able equally to preserve the good parts and qualities as well of the menstrooms as of the mixt bodies whence the tincture is to be drawn. Nevertheless it sometimes suffices to draw out the Tincture of certain Herbs or Flowers with their proper Waters distill'd, adding some small quantity of the Spirit of Sulphur or Vitriol, to assist the penetration of those waters. But then you must dissolve a reasonable proportion of Sugar candy'd, or other very fine Sugar, into these filtred tinctures, to preserve them for some time in Bottles well stopp'd. But the Spirit of Wine is to be look'd upon, not only as the most usual menstruum, for the extraction of the Tincture of the most part of Vegetals, and particularly of those whose moisture is not very much, but as the most analogous and most proper to receive and cherish within it self, their most pure and most essential parts; provided you take care, that nothing be dissipated during maceration; and to keep these Tinctures in Bottles well stopp'd.

For example, put what quantity you please of the cleas'd tops of Wormwood, into a Matras or Cucurbit, with a streight neck; then pouring upon it good Spirit of Wine, some three or four fingers above the Wormwood, cover the Matras or the Cucurbit with a small Vessel of Rencontre exactly well luted; and having let them macerate for seven or eight days over a Bakers Oven, or in some place moderately hot, strain and press the ingredients, and separate the greenish Tincture, containing in it the most pure and most essential parts of the Wormwood; which may be filter'd and kept in a double Glass Bottle well stopp'd, to be given, as occasion serves, from one scruple to two drams, in Wine or in any other liquor, for diseases of the Stomach, Liver, and Matrix.

The same method may be us'd to draw forth the Tinctures of several Woods, Barks, Roots, Gums, Berries, and Aromatick Seeds. And also for those of Saffron, and other Cordial and Cephalick Flowers, and certain Rinds of Fruits; giving them in the same doses, and also very near for the same uses as the Tincture of Wormwood, already spoken of.

In the same manner also are prepar'd several Cephalick, Cordial, Stomachick, Antiscorbutick Tinctures, &c. compos'd of several parts of Vegetals, variously dos'd; in regard that Chemistry begins several of its preparations by Tinctures, as you shall find by the sequel of these pages.

CHAP. XLVIII.

Of Elyxirs.

Elyxirs approach very near to the nature of Tinctures, from whence they borrow the principal of their composition. The opinions of Authors are various touching the Etymology of the word Elyxir. For some derive it from *ἐλεξω* and *σιρω*, comparing these medicines to an extraction of Oil, which they look upon as one of the most essential parts of mixt bodies. Others would have the word to come from the Verb *ἐλεξω*, by reason of the great benefit which is receiv'd by Elyxirs. Others derive it from the Arabick word *Alecksiro*, which signifies an artificial Extraction of a certain Essence. But not to stay too long upon the word, I say, that Elyxirs are spiritous liquors, design'd for internal uses, and containing the most pure substances of choice mixt bodies, made use of in their composition, and which is imparted to them by the means of infusion and maceration. The Spirits drawn from Vegetals, or their spiritous waters, are usually the ground of Elyxirs, and the menstrua made use of to dissolve and retain the true essence of the medicaments, which are admitted into their composition. Nevertheless the Spirit of Wine is the most convenient of all. For which reason it is more made use of then any other menstruum; especially when there is any occasion to dissolve and unite to the Elyxir, any oily or gummy substances, particularly those of Aromaticks, which would remain with the sediment after infusion, had they not met with some analogous liquor, proper to unite with them. This hinders not, but that sometimes spiritous waters less penetrating, may be mingl'd with this Spirit to take off its sharpness, when it is charg'd with these substances, and to make the Elyxir fit to be taken inwardly when it is to be giv'n alone; sometime also some little Sugar or some Syrrup may be added to it, to make it more pleasing to the tast. But there is no necessity of taking away the strength of this Spirit, no more then of the Elyxir, when you have no design to give it alone; but that you keep it to give it in liquors proper to its use; and then the dose of these Elyxirs is but from five or six drops to fifteen or twenty; whereas when the Spirits are weaken'd, you may give it to one or two spoonfuls at a time, adding to it spiritous waters, and sweetning them either with Sugar or Syrrups.

For Example, prepare an Elyxir Camphir'd, by digesting and dissolving half an ounce of Camphire in four ounces of Spirit of Wine, either in *Balneo Maria*, or in a Bath of Ashes; over which they must be set in a little Matras, cover'd with a Vessel of Rencounter perfectly well luted; to which dissolution is given the name of Elyxir, of which not above twenty drops at most are to be taken at a time, in Wine or some Cordial-water, to provoke sweat, fortifie the heart, resist the malignity and venomous quality of the air, to ease the Gout, and to be mainly serviceable in all diseases of the brain. You may also put it into hollow teeth, dipp'd in Cotton, to appease the tooth-ach.

There is an Elyxir of Citron to be prepar'd after the following method. Put into a Matras half a pound of Rind of a Citron, pared and shred very small; and having pour'd upon it two pints of good Spirit of Wine, and half a pint of clarify'd juice of Citron, cover the Matras with a small Vessel of Rencounter carefully luted; and having kept it for four and twenty hours over a Bakers Oven, and strain'd and gently squeez'd the whole, mingle therewith the weight of the distill'd water of Viper-grass, and a pound and a half of fine powder'd Sugar, then having pass'd the whole through a sheet of Cap-paper, you may add if you please, a dram of the tincture of Musk and Ambergreece, which will prove a very delightful Cordial Elyxir, which may be taken from half a spoonful to two whole spoonfuls, to comfort and strengthen and fortifie all the noble parts.

* In which preparation, I cannot but approve the opinion of *Schroderus* and *Rolfinus*, concerning the juice of Citron, which they have put into their Elyxir, to give it an acidity, as pleasing to the tast as proper to temper the heat, and take off the sharpness of the Spirit of Wine; contrary to the opinion of *Frederick Hoffman*, who in contradiction to the writings of *Schoder* upon this occasion, whose Book he had under

undertaken to comment upon, and *was wont to swear to the truth of his Master's words*; yet would take the juice of Citron quite away from this Elyxir, design'd for distempers of the heart, and to resist the venom of the pestilence, without giving any reason for his so doing. But the Doctor forgot that he made the juice of Citron the only Alexipharmakon against the poison of the Viper, to exclude it so idly out of this Elyxir.

CHAP. XLIX.

Of Elyxir Proprietatis.

THE reputation of this Elyxir is too great, and its effects too well known, not to merit here a particular Chapter. All Authors attribute to *Paracelsus* the invention of this medicine; but the imperfect knowledg which he has given of it, and above all things his silence touching the menstruum which is to be made use of, have very much perplex'd those that have come after him, and have been the occasion of the diversity of descriptions which we find up and down in so many Authors. Nevertheless that which *Crollius* hath set forth, has been the best receiv'd. Though there may be great reason to disapprove the Spirit of Sulphur, which he hath put in to draw out the Tincture of the Myrrh, the Aloes, and Saffron, since that Spirit is enough to burn the most pure substance of the Drugs, and by that means to disappoint the Artist and Patient of all the good effects which they expect from this Elyxir.

And therefore I see as little reason, that for the purposes aforesaid, the liquors drawn from the dissolution of certain Salts of Vegetals or Minerals, call'd by the name of *Alkabeft*, should be more advantageously made use of; because that Myrrh, Aloes, and Saffron, are not proof against the natural acrimony of these Salts, which would destroy and consume their most pure and most essential parts. And therefore my opinion is, that upon this occasion, as in all other of the same nature, we must be careful to find out menstrooms which agree in similitude of substance, with the matters whose most essential part you endeavour to separate. And for as much as Myrrh, Aloes, and Saffron, are compos'd of watry parts mixt with Oily, there can be no faileur in their extraction, if congruous menstrooms be made use of, such as I have been wont to use for this preparation.

Having put into a glass Cucurbit with a streight neck, equal parts of choice Myrrh, Aloes, Succotrin, and pure Saffron, finely beaten, and having slightly sprinkl'd them with some small quantity of Spirit of Sulphur, temper'd and qualifi'd with equal parts of Spirit of Wine, pour upon them the distill'd water of Balm, about three fingers above the substances; then having well stirr'd the matters, and cover'd the Cucurbit with a little Vessel of Rencounter carefully luted, let them macerate for fifteen days over a bakers Oven, stirring them from time to time, the better to dissolve the watry substance of the drugs in the Liquor, that is to say, that which will dissolve in the aqueous substance. Then having unluted the Vessels, pour'd out by inclination, filter'd and set apart the tinctur'd liquor that swims above the powders, put in the room thereof about a third part more of Spirit of Wine then you put before of Balm-water; and having carefully luted the Vessels, continu'd maceration a-new for two months, and stirr'd the ingredients from time to time as before, filter the liquor also, wherein you shall find the strength and most essential part of the drugs; upon which you may again pour new Spirit of Wine, and reiterate maceration; but this last residence will not be worth the trouble. Then mix this tincture with the first which was drawn with the Balm-water, and having put them into a Cucurbit cover'd with its head well luted, and plac'd in a Bath of Athes, draw forth with a very moderate fire about two thirds of the liquor, then letting the Vessels and the ingredients cool, pour into a double glass Bottle that which remains in the Cucurbit, and having stop'd the Bottle, keep it for your use.

But to gratifie the inventions of the most part of Authors, who will have the Spirit of Sulphur to make up one part of the composition of this Elyxir; you may

pour upon a certain quantity of this liquid concentr'd together, the third or fourth part of its weight of Spirit of Sulphur, and let them macerate together for two months over a Bakers oven, in a Matraſs cover'd with a veſſel of Rencontre exactly well luted. During which time the acid of the Spirit of Sulphur, will mortify the moſt part of the bitterneſs of the Aloes and Myrrh, and uniting it ſelf with this concentr'd liquor, will bring the Elixer to perfection; and make it proper for the uſes for which Authors recommend it, and particularly *Crollius*, who will have this Elixer to be the Baſom of the Ancients, and to contain all the virtues of natural Baſom, neceſſary for the preſervation of the bodies, eſpecially of old men; he commends it as a wonderfull remedy againſt all diſeaſes of the Lungs, againſt contagious diſtempers and peſtilent Airs, to ſtrengthen and aſſuage the pains of the ſtomach and head, to cure vertigo's, ſtrengthen the memory, break the ſtone in the Reins, to be a preſervative from the Gout and Palfy, to cure quartain Agues, to preſerve Youth, and lengthen out old age, to cure and conſolidate wounds and inward Ulcers; and in a word, by an occult quality to overcome all diſeaſes, as well hot as cold. The doſe is from five or ſix to twelve or fifteen drops in wine, or in any other proper liquor.

But for as much as this Elixir prepar'd with the Spirit of Sulphur, is not proper for all ſorts of perſons, and particularly for thoſe whoſe diſtempers are to be imputed to the exceſs of Acids, which the Spirit of Sulphur may encreaſe; you may do well to keep one part of the concentr'd Tincture apart, to mingle with it upon occaſion, the third or fourth part of this weight of the volatile Salt of Harts-horn well rectified, or ſome other Spirit of the ſame nature, which may qualify the ſharpneſs of the acids by uniting with them; and divert the bad effects of the Sulphur, as I have ſeen practis'd by judicious Phyſicians, well ſkill'd in the grounds of diſeaſes.

CHAP. L.

Of Extracts of Vegetables.

THe name of Extracts is giv'n to the pureſt part of Vegetables, ſeparated from the groſſer, and diſſolv'd in ſome proper menſtruum by the means of digeſtion; and afterwards reduc'd to a thick conſiſtence by diſtillation, or by evaporation of the moiſture of the Menſtruum. Generally Extracts are begun by the Tincture of the ſubſtances; the Tincture is converted into an eſſence; which is a conſiſtence between a Tincture and an Extract; and at length the Eſſence is converted into an Extract. Extracts may be alſo made of diverſe juices, by evaporating the ſuperfluous moiſture, particularly of the juices of ſeveral fruits, berries and herbs. But more Extracts are prepar'd by pouring the menſtruums upon the parts of the Vegetals, whence you intend to draw them, then by making uſe of their juice. Many times alſo ſtrange liquors muſt be made uſe of to extract and ſeparate the more pure ſubſtance from ſeveral thick juices, which carry the reſemblance of an Extract, as Opium, Aloes, Scammony, &c.

Some there are who have written againſt the preparation of Extracts, in regard of the danger which they ſay there is of looſing the moſt eſſential part of the matters. Which opinion may hold in reference to certain Aromaticks, the thin and volatile parts whereof cannot endure the fire; and therefore diſſipate in the evaporation of the liquor; or elſe aſcend in diſtillation, when your deſign is to ſave the fix'd parts. But all the parts of Vegetals are not ſubject to theſe diſſipations; beſides that many times there may be no occaſion to look after any but the fix'd parts. Now for as much as the ſeparation of the pure parts from the impure is very neceſſary in all Extracts; that this cannot be done, without diſſolving them in ſome proper menſtruum, and that the uſe of ſeveral Extracts is as convenient for ſick people; as fit to ſecond the intention of the Phyſicians, we ſhould do them injuſtice not to let them have their place among Chymical preparations.

Now the better to ſucceed in the preparation of Extracts, it requires a diligent ſtudy to know the nature of the ſubſtances of the parts of Vegetals which are intended

tended for extraction; that there may be a proper menstruum made use of, which may have some analogy and correspondence with their pure parts; and by dissolving them may unite them to it, and separate them from the grosser parts. In reference to which I am not of their opinion, who rejecting upon this occasion, the Spirit of Wine, make use only of the Spirit of dew, or distill'd rain-water for a Menstruum in all sorts of Extracts. Because it is impossible for them to dissolve all sorts of substances, especially the Gummy; for which purpose Chymistry can use nothing so proper as the Spirit of Wine. Not but that Spirit of dew or distill'd rain-water may be useful in other dissolutions of pure parts, especially of several Flowers, and some herbs, whose principal parts are watry.

These sorts of Menstruums may be made use of for the preparation of the Extract of the Flowers of Saffron, Gillowflowers, little Centaury, Carduus, Worm-wood, and several Aromatick Gums, though Spirit of Wine is more proper in all those extractions, making use of a very moderate fire, to recover the Spirit, and shutting the Spirit up close, for fear of loosing any of the good properties which it may have carry'd along with it; or to make use of, upon occasion, instead of some preparation of the same nature.

CHAP. II.

Of the Extract of Opium.

Opium being a juice drain'd from the heads of Poppies cut when they begin to grow ripe, and condens'd by the beams of the Sun, in *Greece* where they grow in great abundance, was by the Country call'd *Opion*, or *Opion*, for its excellency; as being a juice very much to be valued, and which produces greater effects and in less quantity, then any juice drawn from Vegetals. But the difficulty of getting Opium drain'd of it self without any mixture, and the foulness of that which is brought to us, which to say truly, is but a *Meconium*, or the juice of Poppy thicken'd, have constrain'd the Chymists to find out ways to purify it. So that when we come to the preparation of the Extract of Opium, there are three different substances to be taken notice of it, wherein are conceal'd the five that Opium has common with several other parts of Vegetals. The difference of the two first, forces me to make use of two several Menstruums, and to proportion each of the two to the substance which it is to dissolve.

Having cut very small and put into a Matrafs, half a pound of the best Opium, which is to be had, and pour'd upon it two pints of rain or river water, stirr'd the ingredients, and stopp'd up the Matrafs, keep it ten or twelve hours in a Sand-bath, over a moderate fire, stirring or shaking it every foot. Then increasing the fire of the Bath, to the end the Ingredients may boil a while, pour out by inclination upon a filter of Cap-paper the Liquor that swims uppermost; and having filter'd it, set it aside. After which having pour'd out two pints of more water upon the sediment, stopp'd up the Matrafs, and repeated the same shakings, maceration, ebullition & filtration of the liquor that swims uppermost, and which will contain the rest of the watry Spiritous and Salt part of the Opium; and mix'd this liquor with the former; pour upon the sediment in the same Matrafs, two pints of good Spirit of Wine, which will presently colour it self, when it begins to dissolve the Gummy substance of the Opium, which is consentaneous to it, and which could not be dissolv'd by the water. Then having cover'd the Matrafs with a little vessel of Rencontre carefully luted, and having continu'd the aceration and stirring of the Ingredient as before, but over a much slacker fire, filter the liquor, and put it up as before. After that having pour'd upon the lees, a pint of new Spirit of Wine, and having done in all things as before, you shall find the Gummy substance of the Opium altogether dissolv'd in the Spirit of Wine, while the terrestrial part of the Opium remains upon the Filter, or at the bottom of the Matrafs. And though it be impossible absolutely to despoil it of its other substances, yet there will remain so little, that it may be well accounted a *Caput Mortuum*.

Then pour the first and second Tinctures of Opium both together, into a glass

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Cucurbit, and having plac'd it in a Sand-bath, and cover'd it with its head perfectly well luted, and fitted a small recipient to its beak, luted in the same manner, with a moderate fire draw forth the Spirit of Wine, which may serve for new extractions of the Gummy parts of Opium, or else to assuage the tooth ache. Then having unluted the head, and pour'd into a little Pipkin, well glaz'd, all the Liquor which remain'd in the Cucurbit, evaporate by degrees the superfluous moisture over the same Sand fire, and bring the whole mass to the consistence of an Extract, which will contain all the pure parts which the Opium had, which consist in a volatile Salt and Sulphury Spirit, in a part gummy oil, half volatile, and in a little other Salt, half fixed by the conjunction of some little Acid which the Opium contains; the whole being still accompanied with some small quantity of Flegm. This in my judgment is the purest and best extraction of Opium that is yet invented. In the preparation the use whereof I dare promise good success, by the innumerable trials which I have made of it for a long time, and which I make every day.

Nor is it to be wonder'd at, that this long experience of mine did not move me before to contradict, as now I do that torrefaction, which several Authors, very famous men, have practis'd upon Opium, to consume the greatest part of its Sulphur, which they believ'd to be dangerous, but which indeed is one of the best and most effectual parts of the Opium; not considering that by that torrefaction the greatest part of the volatile Salt would be consum'd with the Sulphur, and that by that means the other substances would loose the greatest part of their activity. For though we may safely say, that the oil and Sulphury substances resist the penetration of the Acids, nevertheless we are to believe that the Acids naturally uniting themselves to all sorts of Salts, as well fix'd as volatile changes their nature and their action in fixing them, and that while we employ these acids in the dissolution of Opium, we cannot but expect effects very different from those which the Opium might produce, when it has undergone no such like alteration.

The examination of the pure parts, which we separate from the Opium, in drawing forth the Extract, gives us to understand that it would be a vain thing to search for cold substances in Opium, or to attribute those powerfull effects to them which Opium is capable of, though given in a small quantity. Considering that it is not the property of cold substances to work, like Opium, by grains or half grains, nor to do that which cannot be rationally expected from substances not absolutely hot. And though I know no modern Author so weak in judgment, as to accuse Opium of coldness, nevertheless I will give you one remarkable experiment which I made upon my self, about a year since, of which this is the Relation.

Discourfing in my shop one Summer day about eight a clock in the morning with a Phisitian of *Provence*, upon the nature and effects of Opium, and being desirous to demonstrate to him that the sleepy quality, which had been till that time attributed to Opium, was not such as it was imagin'd to be, I took a good piece of Opium and cut in the middle before him, taking out of the middle a little piece of the purest, weighing twelve grains good weight, I made a pill of it, and swallow'd it before him, notwithstanding, all his perswasions to the contrary. After that I fell to my business in the shop, as I us'd to do, and as if I had taken no such thing till dinner time, at what time I sat down, and having eaten my ordinary meal, I found my self satisfy'd, and return'd again to my business in the shop till two a clock in the afternoon; and then going up to my Chamber I lay'd my self down upon Chaires, intending to have gone to sleep: but though I found no inclination at all to sleep; yet because I lay at ease, I lay so till six or seven a clock in the evening. At which time, being call'd up about business, I rose, but perceiving my self doz'd with the vapors of the Opium, when I was got upon my feet, I laid down again upon the Chaires till nine a Clock. At which time not having any stomach, I resolv'd to eat no supper, the better to understand the extent of the effects of the Opium. Thereupon I went to bed, and lay that night in a very pleasing repose, but that which is most remarkable, I had no desire all this while to close my eyes; and that I lay all the while awake, as if I had been up. True it is, that all the time that I lay, as well in my bed, as upon the Chaires, I felt from time to time an itching over every part of my body; which was a certain sign of the Diaphoretick faculty of the Opium; and which perhaps might contribute something to keep me awake, though I felt no trouble at all therein. Rising the next morning at my accustomed hour, I felt the vapours no more, but all the day long I felt the same itching as before, though my stomach were very good. The next night I slept as did before

I took the Opium; not being disturb'd by any kind of itching; upon the morrow morning, which was the third day, my face was observ'd to be swell'd; without any redness, or any pain; however I went all about the City where I had business, though the swelling did not fall before noon.

I could never have spoken so confidently of the effects of Opium, had I not try'd it upon my self twice, taking once before the weight of six grains, and this time twelve. For finding my self to be of a good constitution, and one that was not troubl'd with any predominating humour, which might alter the natural effects of the Opium, I do hence conclude that there ought to be more credit given to what I protest to be really true, as to what I have try'd upon my self, then to experiments made upon six persons, whose different distempers and constitutions, cannot but very much alter the effects of the Opium. Besides that it is not usual to give it them into so great a dose, as to whom I never give but from half a grain to one or two. And if you observe it, you shall seldom find that they cause sick people to sleep to the least excess, how fearful so ever we be of its sleepy quality.

The result of all the Reflexions which I have made at several times upon my experiment, especially upon those which I have made in the exhibition of Opium, is, that the Diaphoretick quality which I sensibly perceiv'd to be in it, is an effect of its volatile Salt, which being united and concentr'd with its Sulphur, and forcing it to follow and assist it's motions, drives toward the pores of the skin the stuliginous and corroding humours, which break the sleep, and cause pains. But though we cannot expect to see such visible effects of Opium, giv'n from one to two Grains, as if you give it in twelve, yet we may judge of the nature of it, by what it does in a great dose.

As to the remarkable effects which it produces every day giv'n but one grain or half a grain at a time, especially when it is giv'n for the ease of pains, or to stay defluxions, we cannot rationally attribute them to any thing else but to the volatile Salt and Sulphur, which the same Salt has united to its self. There is also great reason to believe, that from the close union of this salt with the sulphur, and their just proportion, there arises a certain secret ferment, able to augment it self, by uniting to it the Homogeneous particles which it meets with in the stomach, and to judge that the said ferment, by their conjunction, produces those effects which it could not do without it.

As to what concerns the Narcotick Vapours which may arise from Opium, and which must be attributed to its Sulphur, they cannot be very considerable in regard we give so small a quantity; which we cannot imagine can be able to stop up the passages of the Spirits, nor of the humours which distill down upon the parts. But we are rather to believe, that the ease giv'n to pains, and the stopping of defluxions proceeds from the just proportion of the Salt and Sulphur of Opium, and from the secret ferment which they contain; and that being united with the homogeneous particles which they have met, and having subdued and mortified those that were the cause of the pain, and particularly the acids, they produce their great effects, though giv'n in so small a quantity; and that though this Salt and this Sulphur assisted by their natural ferment, cannot expell the humors so far as they might, if giv'n in a larger dose, yet they may stop and prevent their effects, as we see every day. We must believe also that this Salt and this Sulphur thus united, would not quit their operation, had they been given in a greater dose, though we are always to proportion it to the temper and condition of the Patient. And that so much the rather because experience has taught me, that a person whom I have mention'd in my treatise of Treacle, who had accusom'd himself by degrees to take the Extract of Opium, and to augment the dose to half a dram, and to take it three times a week, was wont every twenty hours after he had taken it, duly to have the benefit of nature, and to go nine or ten times to the stool; which is a manifest effect of the force of the union of the volatile Salt with the Sulphur, and of their natural ferment, which having united to its self and finding it self fortify'd with the homogeneous Salt particles which it has met, produces at length those effects, which might seem to be above its strength, by means of those particles uniting to its self and fixing the acids. And all this while there happens no extraordinary sleep either from a greater or or lesser dose, unless it be occasion'd by any ill disposition of nature, as to Lethergies; which causes the credulous to impute those bad effects to Opium, of which it is altogether innocent.

CHAP. LII.

Of Laudanum.

THE name of *Laudanum* is given to several preparations, or compositions, which have Opium for their foundation, the use whereof is too common to make a particular Chapter of them. The most part of the Ancients, and also some of the Moderns, have put in practise the torrefaction of Opium, and make use of Acids to draw forth out of it an Extract for the preparation of Laudanum. They have also added several tinctures of Aromaticks, and some Cordial-powders, of Magisteries, of pretious Stones, distill'd Oils, several Cordial or Cephalick Extracts, certain volatile Salts, and divers other preparations of Animals or Minerals. But not to repeat what I have said in the foregoing Chapter against the torrefaction of Opium, and use of powerful Acids, I think that the preparation of Opium, which I have set down, is that which ought not to give place to any Laudanum whatsoever; and that the plain preparation of Opium there taught, is beyond all the artifices they can use to Laudanum; considering that we may use whatever other remedies are convenient.

But to allow something to the name and laudable effects which we may expect from Laudanum, I will here insert that description which to me seems the most reasonable that I have met with in Authors, which I took out of the Epistle of *Monsieur Joel Langelot*, a learned man, and Physician to the Duke of *Holsatia*, address'd to the Gentlemen of the *German Society*, imprinted at *Hamburgh*, in the year 1672. There he directs you to put into a glass Cucurbit, low enough, a pound of good Opium cut very small; and after you have pour'd upon it ten pints of the juice newly drawn from very ripe Quinces, and added thereto an ounce of Sal Tartar well dry'd, to expose the Cucurbit to a soft heat for a day or two, or till you perceive little bubbles appear above the Liquor, which is a sign that the ingredients are ready to ferment. He directs you then to add four ounces of powdr'd Sugar, and to make use of a moderate heat to advance fermentation; by means whereof the Opium must rise and totally dissolve; advising withall to keep at a distance from the vapours that will ascend. He says also, that then the impure volatile and scummy part swimming at the top of the liquor, the earthy part will stay at the bottom, and that the pure transparent liquor, as red as a Ruby, will keep in the middle; that you must separate it, filter it, and thicken it with a slack heat, to the consistency of an Extract; that then you must dissolve this Extract in the Spirit of Wine; and that having filter'd it, and digested it for a months time, to rip'n it, and bring to perfection, as he terms it, in that celestial fire, the crudities of the Opium, you must thicken the whole again to the consistency of an Extract, of which he promises wonderful effects upon all occasions, where Laudanum is to be us'd; giving at a time not above a quarter, or at most but half a grain.

This preparation of Laudanum deserves to be approv'd, because there is nothing in it capable to vitiate the nature of the Opium. For besides that there is not in the juice of ripe Quinces any thing of powerful acid, there is but as much as needs to assist fermentation. And that which is there conceal'd, is not only counterbalanc'd by the Sal Tartar, and successively by the Sugar, but also wholly qualify'd by the volatile Salt of the Spirit of Wine, being added thereto with discretion. As for the vapours that rise from the Opium during fermentation, it is impossible to make them good, for besides their bad smell, they are not to be endur'd no more than those of the Spirit of Wine, when it ferments in the Vessel. As to the small dose of Laudanum, it must be imputed to the union and close binding up of the parts of the Opium by fermentation, and their last composition in reducing them to an Extract.

Neither in the one nor the other Pharmacy is there any remedy more proper for so great a number of diseases, nor of which the use is of greater extent, than that of Laudanum, or the Extract of Opium, which I have describ'd in the foregoing Chapter. For it procures rest, expelling the sharpness of the humours that interrupt it, the motion whereof it stops. It fortifies Nature and the parts, whereas other

Narcoticks do the contrary. It corroborates all the bowels, cherishes the natural heat, restores the retentive faculty being debilitated, stops all losses of blood in men or women, as also excessive menstruums, all sorts of Fluxes of the belly, and other thin and corroding defluxions either upon the Eyes, the Teeth, the Ears, the Throat, the Lungs, the Stomach, and all other external or internal parts. It asswages all pains of the head that proceed from attenuated humours, tak'n inwardly or apply'd to the Forehead and Temples. It dissipates the wind and noises of the Ears. It eases the Tooth-ach. It stops vomiting after evacuation, as also the violent purgations and fermentations of humours. It gives ease to windy and cholerick Cholicks, and all sorts of griping pains of men or women; as well swallow'd as mix'd in Clysters. It is a sovereign remedy in Dysenteries, as well to hinder the fermentation of the humours, as to remove their acrimony, after necessary purgations. It is made use of also with good success in all diseases of the Reins and Bladder, to asswage the pains thereof, as of Gonorrhæa's, and to strengthen the Spermatick Vessels. It asswages the pains of all sorts of Gouts and Rheumatisms, those of Ulcers and burns, and in general all sorts of pains that can happen in any part, to any person, of whatever age or sex, at any time, or whatever the cause may be, especially after the use of general remedies, without which the use of Laudanum would do but little good.

CHAP. LIII.

Of the Extract of Aloes.

IN Shops the thick juice of the Plant of Aloes is taken for Aloes it self, which is usually brought us out of *Arabia* or *Egypt*, dry'd and wrapt up in skins, and of which we see three sorts. The least of which is call'd by the name of *Aloes Caballin*, or Horse-Aloes; by reason of its foulness; for which reason it is only us'd in medicines for Horses; whereas the middle Aloes being a little more clean, and in colour resembling the Liver, carries the name of *Heppatick*, and the purest and best retains the name of *Succotrin*, or *Socotrin*, as being gather'd in great abundance in the Island of *Socotra*. This is the only Aloes to be made choice of to make the Extract, and to be us'd upon all occasions where Aloes is prescrib'd; the chief marks to know the goodness whereof, are to be of a purple colour and shining transparency, when it is broken in pieces, and to be of a grateful scent.

In Aloes there are two principal substances, of which the one being watry and salt, is easily dissolv'd in liquors conformable to its nature; whereas the other, which is gummy, is never so properly steep'd in any thing, as in the Spirit of Wine. You may dissolve the first in fair water, like Opium; but usually those liquors are made use of which are most proper to second its vertues, or at least to fortifie the stomach and bowels, during its operation; such are the clarif'd juices of pale Roses, Violets, Succory, Bugloss, Burrage, Fumitory, &c. The method to be observ'd both in the one and the other Extraction, is so like to that which I have directed for that of Opium, that it would be superfluous to give new directions. I will only say this, that the two most common Extracts of Aloes, which are prepar'd in Shops, are made the one with the juice of pale or red Roses, the other with Violets, under the names of *Aloes Rosatum*, and *Aloes Violatum*, in both which you are at length equally oblig'd to make use of Spirit of Wine, if you intend to put into the Extract the gummy part of the Aloes, though some are contented with the watry and salt part, reserving the gummy for vulnerary Balsoms, which is the most advantageous use that can be made of that part.

The two Extracts of Aloes, which I have mentioned, are very near the same in reference to their vertues and uses. But that which is made with the juice of Roses is somewhat more purgative then that which is made with the juice of Violets. And here I will take occasion to make the composition of *Pilula Angelica*, which the Apothecaries of *Frankfort* have sold for a long time under the name of *Frankfort Pills*; and keep as a great secret, for fear others should make advantage of them,

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Take for Example a pound of good Aloes powder'd, and having dissolv'd in *Balneo Maria*, or in a Bath of Ashes or Sand, the watry part in juice of Violets, newly press'd forth; and the gummy in the Spirit of Wine, and filter'd and mix'd the two dissolutive into a glaz'd earthen Pipkin, evaporate the superfluous humidity over a very soft fire, till it become as thick as Honey; then adding the double of its weight of new juice of Violets, evaporate the moisture with the same heat, till the mass be so thick that you may make it into Pills, which will operate the same effects, as those whose reputation is so great, under the name of *Frankfort* Pills; whose chiefest virtue consists in the qualification which the juice of Violets gives to the acrimony of the Aloes; which is the reason that most Authors forbid the use of it to persons of either Sex, who are subject to the Haimorrhoids, spitting blood, bleeding at nose, or any other Flux of Blood whatsoever, or to those who are troubled with ulcer'd lungs, or whose lungs are wasted with hectick Fevers; as also to women with child, for fear of opening the Vessels; and other accidents which the Aloes might produce. Whereas, setting aside these precautions, they recommend the Extract of Aloes for the preservation of health, to cleanse the stomach of corrupt humours, which lye in the Tunicles, to open obstructions of the Liver, Spleen, and all the Bowels, expelling the filth thereof at the same time, and fortifying their parts.

Some, besides the juice of Violets add to their Aloes the juices of Roses, Fumitory, Burrage, and Bugloss. Others make an augmentation of the juices of Carduus, Cammamel, Germander, and Speedwell; imagining that those juices were some part of the ingredients of the *Frankfort* Composition. But though the most part of these juices may be made use of in diseases of the stomach, spleen, and liver; besides the unnecessary addition they would make to the weight and mass of those Pills, they could not all together, so far nor so effectually qualify the acrimony of the Aloes as the juice of Violets, while they chang'd the true receipt of the Pills.

These Pills are usually made up very small, not to weigh above half a grain apiece. They are taken in a Wafer or roasted Apple, or in some sweet-mear, from five or six to fifteen or twenty grains, just going to dinner, or rather to supper; for in regard they do not work till ten or twelve hours after they are taken, the Patient has time enough between to sleep.

CHAP. LIV.

Of the Extract of Rhubarb and Senna.

THE greatest part of the purest substance of Rhubarb, being watry and salt, as also that of Senna, watry menstruums must be made use of for their extraction. But after you have extracted that substance, you must make use of the Spirit of Wine to dissolve the gummy substance which remains in the sediment. To which purpose having bruised or cut very small a pound of good Rhubarb, and put it into a glass Cucurbit, pour upon it four pints of the distill'd water of Succory or Endive; then having plac'd the Cucurbit in a Bath of Sand, and kept a very moderate fire under the Bath for ten or twelve hours, strain and squeeze out the tincture forcibly. Then returning the sediment into the Cucurbit, and having pour'd upon it two pints of new Succory-water, renew the maceration in the same Bath, and with the same heat for six hours; then having strain'd and press'd out the substances, and return'd the sediment again into the Cucurbit, pour upon it a pint of good Spirit of Wine; and having cover'd it with a Vessel of Renconter carefully luted, put it into the same Bath, and renew'd maceration for six hours, strain the whole and press it out very hard. Then having mix'd this Tincture with the former, and pass'd the whole mixture through a sheet of Cap-paper, pour the filter'd liquor into a glaz'd Pipkin, and evaporate the superfluous moisture over a very gentle fire, which must be continu'd till the principal substance of the Rhubarb remains at the bottom of the Pipkin about as thick as the consistence of an Extract. And to make advantage of all the

the good parts of the Rhubarb, having dry'd the sediment and reduc'd it to ashes; you may draw forth a small quantity of fix'd Salt, to incorporate with the Extract, which you must put up in a close pot well stop'd, to use upon occasion, at which time you may mix with it a drop or two of oil of Camomile or Cloves.

There is no necessity of cutting or bruising the leaves of Senna to make the Extract, it being sufficient to cleanse them well before you use them, observing moreover the same method as for the Extract of Rhubarb.

The Extract of Rhubarb is one of the most gentle and wholesome Purgatives that are. For by emptying the stomach and bowels of ill humours without any violence, it fortifies all the parts which they possess'd, and resists the malignity of the same humours. It goes for a specifick purger of choler, especially among those who think there are medicines that purge by Election: though there be no medicament able to separate them the one from the other, when they are mingl'd together, and to purge out one alone by its self, unless the rest that are mix'd with it issue forth at the same time. This Extract is chiefly prescrib'd in Diarrhea's, Lienteries, Disenteries, Icteric distempers, Cachexites, and in other diseases of the stomach, liver and spleen, as also in tertian and other Agues proceeding from choler, and to kill worms: the dose is from half a Scruple to half a dram, in Bolus or in Pills.

The Extract of Senna is chiefly to purge melancholly humours; though that hinders not but that it may purge cholerick humours, or any ill humours gather'd together in the stomach and bowels. The dose is the same, as for the Extract of Rhubarb.

CHAP. LV.

Of the Extract of Coloquintida.

Coloquintida is a kind of Gourd, about the bigness and shape of an Orange; light and white when the rind is taken off, and of an extraordinary bitter tast. It contains two principal substances, the one a watry Salt, and the other Gummy. Which last is here more abundant then in Rhubarb. So that some Authors make use of nothing but the Spirit of Wine for its extraction; and among the rest *Martin Rulandus*, who making frequent use of the tincture of Coloquintida, drew it forth with the Spirit of Wine, and call'd it the *Golden Spirit of Life*. But because it is requisite that the Extract should contain an equal proportion of both the substances, the best way will be to proceed in this manner.

Having cleans'd the Coloquintida from all its grains, and cut the Pulp very small, put a pound thereof into an indifferent large Cucurbit; and having plac'd it upon a Bath of Sand, and pour'd upon the Coloquintida six pints of good new white-wine; cover'd the Cucurbit with its head, and well luted it, and fitted a Recipient to its Beak, kindle a fire under the Bath, which you must keep very slack for ten or twelve hours. Then having unluted the vessels, strain'd and forcibly squeez'd out the infusion, and set it apart, return the sediment into the Cucurbit, and pour upon it a pint of good Spirit of Wine, and all the Wine which was made use of in the former tincture, and which was distill'd into the Recipient. Then covering the Cucurbit with a vessel of Rencounter perfectly well luted, and having macerated the whole for twelve hours in a Bath like the former, but with a little more heat, strain and press forth the tincture with a good strength, and having mix'd it with the former, and pass'd both through a Sheet of Cap-paper, put it again into a Cucurbit, and having cover'd it with a head carefully luted, and fitted a Recipient and well luted it to the beak, draw back again in a Sand-bath with a moderate fire the Spirit of Wine, which will serve another time for the like Tinctures: then taking off and unluting the vessels, pour all the liquor that remain'd in the Cucurbit into a glaz'd Pipkin, and evaporate the superfluous moisture by degrees in a Sand-bath, with a moderate heat, till it have acquir'd the consistence of a Rob: then letting it cool, shut it up close in a bottle, to mix it upon occasion with other purgative Extracts, at the end

of their evaporation, or for other uses. You may also continue evaporation, and reduce this Rob to a real Extract of Coloquintida.

Some in the preparation of this Extract make use of Troquisks of Alhandal, which are made of the pulp of Coloquintida powder'd, and Muscolages of Gum Tragacanth, intending thereby to qualify the sharpness and the violent operation of the Coloquintida, as to thicken and multiply the Extract which is not over abounding of it self; which is not amiss for them that so intend it.

The principal vertue of the Extract of Coloquintida, is to expell the serosities of the remote parts of the body. For which purpose it is very proper for the cure of Hydropicks, where gentler medicines will not prevail. It is also commended in diseases of the joints, and in Rhumatismes, and against the Gout, mixing it with other Extracts, especially with that of Rhubarb to qualify its activity, and fortify the parts at the same time. It is giv'n alone in Pills, from two or three grains to eight or ten, or mix'd with other Extracts, and then the dose is proportion'd with respect to the quality of the rest.

CHAP. LVI.

Of the Extract of Tithymal.

I Will notin this preparation, nor any where else, imitate the Ancients in the infusion which they make of the root of Tithymal, for fear of carrying off by that powerful acid, that which is chiefly sought for in this Extract, which is to purge serosities, and particularly Hydropick waters; believing that this preparation may be better made, without making use of any such acid, if this method be observ'd.

Having gather'd in the month of *May*, in fair weather, what quantity you please of the whole plant of the lesser *Essula* or *Spurge*, wash it well, then bruise it in a *Marble Mortar* with a wood'n *Pestle*, and fill about two thirds of a glass *Cucurbit*, then pouring upon it good new white-wine, till it swim above four good fingers breadth above the herbs, cover it with a vessel of *Rencounter* well luted; then having kept it for four and twenty hours upon a Bath of Sand, over a very moderate fire, strain and press out the infusion, and keep it apart, then return the sediment into the *Cucurbit*, and having pour'd upon it good Spirit of wine till it surmount the ingredient only one good fingers breadth, cover the *Cucurbit* again with a vessel of *Rencounter*, and having well luted the jointures, keep it five or six hours in the same Bath, then having again strain'd and press'd out the last infusion, and having mingl'd the liquor with the former, pass them through a sheet of Cap-paper; then put them into a clean *Cucurbit*, plac'd in a Sand-bath, having cover'd it with its head, and well luted the jointures, as also those of the Recipient fitted to the beak, and recover the Spirit of wine with a moderate fire; Then pouring out the remainder into a glaz'd *Pipkin*, plac'd in the same Bath, gently evaporate the superfluous moisture, till that which remains do become as thick as an extract. Then letting it cool, aromatize it with some few drops of oil of *Aniseed*, *Cloves* or *Cinnamon*, and keep it till occasion.

The Extract of *Spurge* is a powerful *Hydragogue* or drawer forth of water; and therefore is made use of with success in dropsies, from half a scruple to half a dram, in *Bolus* or *Pills*, repeating the use, and increasing the dose according to occasion.

You may prepare several other Extracts proper to purge waters, and among the rest those of the *Roots* of *Orrice*, *Briony*, and *Elder*; drawing forth the juice, depurating the juices, and causing them to evaporate. softly in a glaz'd *pipkin*, to the thickness of Extracts: or by macerating these roots, well bruis'd in white-wine, for ten or twelve hours, straining and pressing out the infusion, and filtering and evaporating the liquor to a necessary consistence. The dose and use of these Extracts are much the same with those of the *Root* of *Spurge*.

There is also a water purging Extract to be prepar'd more violent then these,
with

with the clarified juice of the fruit of the wild Cucumber, evaporated over a small fire, in a glaz'd earthen pipkin, to the consistence of an Extract. Which Extract is call'd Elaterium, the dose whereof is not above two, three or four grains at most. I omit those Extracts which may be drawn from the leaves or seeds of Sea Bindweed, Spurge Lawrel, Dwarf Bay, Hops and Elder: the preparation whereof would be easy enough, were they much in use.

You may also dry and burn the sediment of these Extracts to draw forth a Salt out of them, and to mix with them, when they are perfectly prepar'd.

CHAP. LVII.

Of the Extract Rosin, or Magistery of Scammony.

ALthough in distilling Scammony through a Cornute, you may draw fine substances out of it, which are usually extracted out of several other parts of Vegetals, yet we seldom put our selves to the trouble, in regard the medicines would not be extraordinary. And therefore it is sufficient to make use of the Rosiny part, which is useful upon many occasions, being once separated from the Terrestrial part. For the accomplishing whereof, after you have made choice of pure Scammony light and very Rosiny, beat it small, and put a pound thereof into a glass Cucurbit, and pour upon it good Spirit of Wine, four fingers breadth above the Scammony, cover the Cucurbit with a vessel of Rencontre, and having carefully luted the jointures, and well shak'n the matters to facilitate the penetration of the wine, place the Cucurbit in a Sand-Bath, never so little heated, and keep it there for twenty four hours, every foot stirring or shaking the whole. Then having pour'd out by inclination, and set apart the colour'd and clear Tincture, which swims at the top of that which is not dissolv'd, pour in as much new Spirit of wine as at the first time, and stopping the Cucurbit again with its vessel of Rencontre, renew the digestion again in the same Bath for the same time, stirring it as before, which will suffice for the entire dissolution of the Rosiny part of the Scammony; then pass this Tincture through Cap-papers, and having made the Cucurbit very clean, pour it together with the first clear Tincture into the Cucurbit, which after you have cover'd with its head well luted on, and fitted and luted a Recipient to the beak, you must place in a Sand-Bath, and with a moderate fire draw back about two thirds of the Spirit of Wine. After which having unluted the vessels, you shall find at the bottom of the Cucurbit the Rosiny part of the Scammony of a colour inclining to purple, transparent, and as thick as well boil'd honey; which may be call'd the Extract of Scammony; above which you shall see the more watry part of the Spirit of wine, which must be separated by inclination; then gently warming the Cucurbit, pour out the Rosin into an Earthen glaz'd Pipkin, and having cover'd it with a paper, expose it to the Sun, or set it over a Bakers oven to dry, so that you may powder it, when you come to use it.

You may have a Magisterick of Scammony by emptying into a glaz'd Earthen Pipkin, some part of the Tincture of Scammony, and pouring upon it eight or ten times the weight of cool fair water. For by that means the Spirit of wine which dissolv'd the Rosiny part of the Scammony, being weakn'd by the water, is constrain'd to forsake the same substance; whence it comes to pass that the Liquor looks like milk, and that the Rosiny substance precipitates to the bottom, being separated from the liquor; the rest swimming above the liquor, or adhering to the sides of the Tincture, whence it may be separated, after you have pour'd out the liquor by Inclination.

The chief vertue of Rosin of Scammony is to purge cholerick and flegmatick humours. The dose is from five or six to twelve or fifteen grains, mingl'd in some conserve, like, a bolus, or else in proper liquors. But you must be very careful to grind it very small, and to mix with it a fourth part of Almonds, or of some cold

cold seed well cleans'd to divide the parts of the Rosin, and to prevent it from sticking to the Tunicles of the stomach, when it swims above the liquor which may cause griping pains, and over-purgation.

CHAP. LVIII.

Of the Extract Rosin, or Magistery of Jallap.

Jallap consisting of more earthy and watry salt parts, and less Rosiny, then Scammony, you will do well to employ two distinct Menstruums to dissolve and extract the two distinct substances; contrary to the judgement of most part of Authors, who looking after the Rosiny substance of the Jallap, and neglecting the rest, make use of only Spirit of Wine for its Extraction. But that you may not loose any of the good parts of the Jallap; after you have beat a pound very small, and put it into a glass Cucurbit, pour upon it four pints of white-wine, and having blended them well together, and cover'd the Cucurbit with a vessel of Rencounter well luted, set it four and twenty hours in a Sand-bath over a very gentle fire, stirring the substances every foot, without unluting the vessels, unless at the end. At what time having taken off the vessel of Rencounter, put a head in its place, and fitted and luted a Recipient to the beak of the head, increase a little the fire of the Bath, to cause the Spiritous part to distill, which you must keep. Then having unluted the vessels, and strain'd and squee's'd out, filter'd and set aside the liquor, return the sediment into the Cucurbit, and pour upon it a pint of good Spirit of wine, together with that which was before distill'd and set aside. After which having carefully shaken the Ingredients, and cover'd the Cucurbit with a vessel of Rencounter, keep it four and twenty hours over a soft fire in a Sand-bath, then unluting the vessel of Rencounter, pour forth by inclination the clean clear Tincture that swims upon the sediment; upon which, after that, pour another pint of good Spirit of wine; cover the Cucurbit with its vessel of Rencounter, and set it in the same Bath, and renew Maceration for the same time. Then having filter'd and mix'd the last Tincture with the former, you may if you please mingle both with the first of all, and having pour'd them into a glaz'd earthen Pipkin, evaporate the superfluous moisture over a very gentle heat, till the settlement be thick enough, and that it may be properly called, as it is a true Extract of Jallap. To which you may very properly add the fix'd Salt, extracted from the sediment dried and reduc'd to ashes.

But if you would have the Rosin or Magistery of Jallap apart, you must look for it only in the two last tinctures, drawn forth with the Spirit of wine, proceeding as I have directed for the Magistery of Scammony.

The vertues and dose of the Rosin and Magistery of Jallap are much the same with those of the Rosin and Magistery of Scammony. The Extract also tends to the same end. But you may increase the dose to half a dram, as well by reason of its moisture, as of the other parts of the Jalap, which increase the weight and quantity of the Rosin.

The same method is to be observ'd in preparing the Extracts of Rosins, and Magisteries of Agarick, Mechoacan, Turbith, Hermodactiles, Ellebore, and such other Roots, the parts whereof resemble those of Jallap.

CHAP. LIX.

Of the Panchymagogue Extract.

THere is no Chymical Composition more varied in Authors then this Extract, as well in reference to the simple Ingredients, as to their dose and proportion. But setting all disputes aside, and leaving those Extracts to themselves, I will here produce one, which as to the doses, and preparation of the ingredients, seems to me very reasonable.

Take two ounces of the Extract of Aloes, and as much of the Extract of Rhubarb, one ounce of the Extract of Senna, much of each of those of Scammony, Jalop, Agarick, and Coloquintida, and half an ounce of that of black Hellebore. Prepare each of these Extracts as I have directed in the foregoing Chapters, but let them be no thicker then Honey. Having put together and well mingl'd these Extracts, in a little glaz'd earthen Pipkin, plac'd in a Sand-bath over a very moderate fire, evaporate by degrees the overplus of the superfluous moisture, stirring them gently from time to time with a Spatula, till they are come altogether of a good consistency of an Extract. At which time having taken off the Pipkin from the Bath, and let the Extract stand till it be almost cold, incorporate into it four drops of the distill'd Oil of Cloves, and as much of each of the Oils of Fennel, Lavender, and Marjoram. The Extract will then be perfect, and fit to be put up close in a Galley-pot, or some other Vessel, or oil'd skin, to use upon occasion.

Proceeding according to this method, there is no fear of the separation of the Rosiny substances, from the concentr'd watry salt ones; which might happen to this Extract, if the Rosins were not powder'd and mix'd with some Almonds, or some cold Seeds in grinding them, or if they were not dissolv'd a-new in Spirit of Wine. For experience and reason plainly shew us, that these different substances unite exactly together, and remain united so long as the Extract keeps its usual consistency; and that the Rosiny cannot be separated from the watry substances, but by dissolving the latter in some watry liquor, which is not able to dissolve the Rosiny. And though it were impossible to mix these Rosins in a watry and salt Extract, thick and cold, without putting them in, in powder before, when they are dry, nor to reduce them well into powder without mixing some seed or some oily matter apt to divide the parts; yet it is certain, that being once well mingl'd with the Extract, they cannot separate of themselves. Neither in this preparation is the dissipation of the principal parts of Aromaticks to be fear'd, in regard that instead of an Extract, which some Authors would have drawn to mix in this, we make use of their distill'd Oils, which contain in a small room their principal vertues; and because these Oils cannot dissipate themselves, as being mix'd when the Extract is almost cold.

Now whereas *Zwelfer* pretends to draw forth with the Spirit of Wine, the Extracts of parts of Plants, whose substance contains a mixture of watry, salt, and Rosiny; I persist in my first opinion, which is, that the former ought to be extracted in watry liquors, before we make use of Spirit of Wine for the extraction of the latter; considering that that Spirit being well rectified, as it ought to be, has not force enough to extract the first. I wonder also, that a person who having been an Apothecary, and one that in his writings brings in question the sufficiency of his Brethren, did not foresee, that he expos'd himself to their censure, while he only pretended to make use of the Spirit of Wine for the extraction of these mixt substances; and more, by affirming, that the volatile Salts easily unite themselves to the Spirit of Wine, since the trials that Apothecaries make thereof every day, make it manifest, that these Salts do not dissolve in Spirit of Wine, as being all inflammable, and that the same Spirit dissolving the oily particles which are mix'd among the same volatile Salts, preserves in its own body the same Salts without dissolution, and that it hinders also dissipation by swimming above them, provided the bottle be well stop'd. Besides that he himself confesses, that the Spirit of Wine cannot dissolve the fix'd Salts, which are with the volatile, which is the chiefest substance which the watry part of these parts of Plants contains.

This

This Extract is call'd by the name of *Panchymagogue*, or universall purger of humours; because it purges in general all bad humours out of the body. It is giv'n in Pills, like other Extracts, from half scruple to half a dram, or two scruples.

CHAP. LX.

Of Dregs.

WE may put *Dregs* among Chymical preparations of the worst invention, which may be better let alone, then be prepar'd with wast of time; especially following the opinion of those who have written first thereof. The name of dregs is rightly given to the filth, that separates and falls to the bottom of several liquors. But by the name of dregs we are here to understand only a white mealy substance, fall'n down and gather'd together at the bottom of the juice, or liquor of certain Roots, as of Briony, Aron or Wake-Robin, Iris. &c. This white and mealy substance, being separated by Inclination from the liquor; is dry'd in the shade or in the Sun; and though I advise no person to make these preparations, I will not omit to set down the method of making them.

Take the Roots of Briony, Orrice or any other root well grown and newly gather'd, and having well wash'd and cleans'd them from their outward rind, rasp them very small, and having press'd out the juice through a very strong cloth, let it stand two or three days in an earthen Pipkin. Then by inclination pour out the clear liquor, that swims above the white substance, which is become Dregs. This is afterwards to be dry'd in the Sun, or in the shade at leisure, or if you are in hast, in a Bath of Sand, with a very moderate heat. By this means you have the Dregs of the root made use of. Which cannot be other then a substance void of vertue being despoil'd of the vertue of the juice, which is separated from it: and which cannot produce the effect of Extracts drawn from the juice of those Roots; I say moreover, that the powder of these Roots cut in little round pieces, and dry'd with the juice, is much better then the dregs any way prepar'd.

The Extract drawn from the juice of the Root of Bistort or snake weed is call'd particularly by the name of *Chersa* or *Gherfa*. Of which they do not only separate the liquor that swims above the feces, but also dry it with the feces, dividing it into little vessels, and exposing it to the Sun, till it is fit to be powdred.

CHAP. LXI.

Of the Salts of Vegetals.

THE preparation of some Salts of Vegetals which I have occasionally set down, when discoursing of the distillation of some sorts of Plants, not being enough to give all the might necessary for such a subject, so considerable and of so large an Extent, I thought it convenient here to make some new Reflections, and at the same time to communicate my method to publick view; not only in reference to preparations that pass for common, but also those which having been known but only to few people, have been conceal'd or counterfeited by those that had the true knowledge thereof.

Formerly it was not believ'd that the Salts of Vegetals were volatile, because that that which is drawn from them by usual means, does not exhale with the fire, but rather endures Fusion, then to quit the bottom of the vessel where it is put. However

ever they would not have fall'n into such an error, had they well understood the nature of Salts, especially of those which are drawn from Vegetals. For we must believe, that there are two sorts of them, the one of an acid, the other of a salt taste; that each of these Salts are naturally volatile, as well while they are mix'd together in the mix'd body, and as it were in confusion among the other principles, as when Chymistry has separated them by Art one from another. But in regard of their great inclination to unite together, they do it so soon as they are separated from the other principles; and uniting as soon as they can that small quantity of earthiness which serves to strengthen their union, they compose together a fix'd Salt which most part of the ancients, and several of the moderns believe to be of it self, and naturally such. Not considering that the quality of fix'd did not happen either to the one or the other of these Salts, but by the union of the volatile with the acid, and of both together with some particles of earth, which serv'd them as a foundation.

I believe moreover, though it cannot be said, that there is any Plant which has not its proper Salt, yet there is no possibility to distinguish it, or to qualify it to be such, until it be separated from the other substances, and that ustion and incineration of the substances being the most proper ways to bring it to pass, the sulphury part flies away by that means, as also the watry, which tempering and weakning the acid Salt, hinder'd its strict union with the volatile Salt. I say moreover, that the acid and volatile Salts finding themselves thus disingag'd from their principal oppression, and assisted by the acid particles of the fire, which have much conformity with them, unite by degrees, but very strongly and strictly one to the other; that the small quantity of earth which is mix'd among them, promotes their union, so far it is from hindering it; and that the Salt which proceeds from this union, is properly a body compos'd of acid and volatile Salt, and some particles of earth which pass'd through the filter with them after they were dissolv'd in Water.

I also say, that in the ustion and incineration of the Plants, there is a colliquation or rather melting of the substances, and particularly of the Salts, without which they could not act, nor re-act as they do one upon another, to compleat their intimate union, or make such a composition as we find. The qualities whereof appear to us very different from those which are observ'd to be in the same Salts when they are separated. That the generation, consistence, and form of all Vegetals depends upon these two Salts; and though that they may severally subsist the one without the other, and be of themselves incorruptible, when they are so put up that the air cannot corrupt them; yet they much better maintain and uphold one the other, when they are entirely united; and that we may say of them, that they are like the two Poles of Nature; the foundation, cement, and sustainment of all animated or inanimate beings; and that there is no generation or production without them.

CHAP. LXII.

Of the Salt of Carduus Benedictus.

THE ustion and incineration of the parts of Plants, is not always necessary for the union of the acid with the volatile Salt, to compose a fix'd Salt, in regard we find by experience, that without their help we can draw from Carduus Benedictus, Wormwood, Sorrel, Centaury, and many other Plants, a Salt compos'd of acid and Alkali, much resembling the nature of fix'd Salts; though not so able to resist the fire, as that which you may draw from the same Plants by reducing them to Cinders. And though it is not to be expos'd to the fire without some remarkable diminution of its quantity, and chiefly of the watry part, which was incorporated with it, and without some dissipation of the acid, which was not entirely united with the volatile, or had surmounted it in quantity; nevertheless, this Salt not having suffer'd the violence of the fire, ordinarily made use of for the ustion and incineration of these Plants, and containing in it self their most essential part, is much

better for physick then that which has suffer'd incineration, In regard it still contains one good part of the Sulphury substance of the same plant, whence it was drawn, and that it has in part the savour and scent of it, so long as the watry part of the plant which is incorporated with it, does not fail to abate it's acrimony. These Salts are call'd Essential Salts, because they contain the most Essential parts of the plant. They are generally of a dark colour, unless calcin'd in a Crucible, or that you dissolve, filter and coagulate them again; though it be much better to keep and make use of them in their dark colour, then to dissipate their Sulphury part by Calcination, and withall the scent and taste of the plant which they retain'd.

The presidents which I have set down for the Extraction, depuration and evaporation of the juices of plants, thereby to extract their Essential Salt; as also for their Union, incineration, lixiviation, filtration, and coagulation, thereby to extract their fix'd Salt, having no need of repetition, I shall not any farther enlarge this Chapter.

The Essential Salt of *Carduus Benedictus*, containing much of the sulphury parts of the plant, is proper to provoke sweats, being giv'n especially in its own water. It is an enemy to worms, and resists the putrefaction of humors, and the malignity of Fevers. That which is drawn from the ashes of the same plant, has almost the same vertues, but the effects are rather purgative, then Diaphoretick. This latter, being more fix'd, is much more proper to mortify the acids, which excite fermentations in the stomach and lower parts. The dose of both these Salts, is from half a scruple, to half and sometimes a whole dram, in its own water, in broth, in wine, or in any other convenient Liquor.

CHAP. LXII.

Of the Essential Salt, Cream or Crystal of Tartar.

THERE is no mix'd body among Vegetables, which abounds so much as Tartar, in volatile Salt, and acid Salt, for to speak properly these two Salts are, very nigh, the whole considerable substance of Tartar, in regard there is no notice to be tak'n of the water or earth that is found therein. Tartar has the juice of Grapes for father, Fermentation for its mother, and the Cask is the Matrix. It is to be lookt upon as a remarkable example of the natural union of the volatile Salt salt with the acid Salt, and of the change of the first into fix'd by the union of the latter; as also, as an example of the Lapidification in our bodies by the conjunction of acid and volatile Salts, and of them two with some terrestrial particles.

This change of the volatile Salt salt of Tartar into fix'd, is much more natural, and done with less violence, then that which happ'ns to the Salt of plants by incineration. Nor does it suffer any other heat then that which its own acidity causes, after it has rais'd the fermentation. It is also in the reciprocal action upon one another of this acid Salt with the volatile Salt salt, and the volatile sulphury Salt of the juice of the Grapes, during Fermentation, that the same volatile sulphury Salt unites to it the greatest share of the watry part of the same juice, and as much of the acid Salt as is requisite for its perfection, and for its alteration into wine: and that another part of the volatile Salt salt unites it self with the rest of the acid, and some small quantity of the Terrestrial part of the juice, and that being fix'd and lapidif'd, it sticks like Crystal to the heads and bottoms of the Casks; and that another portion of the volatil sulphury Salt mix'd with a little of the Salt salt, some of the Terrestrial part, some remaining part of the wine, and a very little acid, descends to the bottom of the vessel, and makes the Lee.

But it is not enough that nature has made all these different separations and unions of substances in the same Cask, and that she has bestow'd considerable preparation, Chymistry must make an improvement upon all these things, and by

new

new separations and purifications, she must bring forth the conceal'd and confus'd substances, and give them perfections beyond what nature has afforded them.

The first and most simple preparation of Tartar is that of its purification, which may be more or less perfect as you your self desire it to be. For after you have made choice of the purest, the most shining and the most Crystalline Tartar, and powder'd it very small, sometimes it is enough to stir this powder in fair fountain or river-water, and to wash it over and over again, till there be no filth remaining, but that it come out as clear as it went in. Nevertheless this Lotion will not bring Tartar to its height of purity; only it separates the woody and terrestrial parts, provided they be not Sandy, and makes the Tartar more fit for the uses to which it is design'd. Yet some prefer Tartar thus cleans'd before that which is dissolv'd in boiling water, believing that the heat of the water diminishes the substance, or changes the virtues.

The second and highest putrification of Tartar is the reduction of it into Cream or Crystal, Which may be thus done. For example, put three or four pound of Tartar wash'd as I have directed, into a clean copper Kettle, over a good Charcoal fire, in ten times as much fair water, and having let them boil for a good quarter of an hour, stirring them from time to time with a wooden Spatula, and taking off the scum, strain them through a wollen cloth, and then strain that liquor again, till it be all perfectly clear. Then letting it cool, you shall find a kind of a Cream swimming above the water, like a crust, and the rest of the essential Salt of Tartar sticking like pieces of Crystal to the sides and bottom of the vessels, which you must gather together, wash and dry, to use, if you please, in that condition. But if you desire to make it more beautiful, boil it in a large possnet in new fair water; and when it is altogether dissolv'd, and the water so far wasted, that you may perceive the Cream to settle at the top like a thick skin, take off the Possnet gently from the fire; and letting the Liquor be quite cold without touching it, the Cream at the top will be very thick, and the clear and white Crystals will stick to the bottom and sides of the Possnett, which having wash'd and dry'd, you may keep for use.

The great quantity of Crystal of Tartar which is made in those Countries where Tartar is very common, is the reason that there they make use of Copper-vessels; though it were better to boil your Tartar in Possnets of Pewter. For though the Tartar be not able presently to penetrate and dissolve much of the Copper; yet during that small stay it makes in the Vessel, it fetches off some particles that certainly mix among the Cream or the Crystals; as may be observ'd in the Crystal of Tartar prepar'd in those places, the substance whereof is dusk and the white colour inclines somewhat to the colour of Copper: whereas that which is prepar'd in Pewter Vessels, is perfectly white, and very transparent.

The separation which the woollen bag makes of the parts of the Essential Salt, is the reason that it appears almost all in powder, at the bottom, and upon the sides of the Vessel; and that to have it in Crystals, after you have boil'd it and dissolv'd it in fresh water, you must take it off so gently from the fire; to the end that the liquor, not being stirr'd, the parts of the Essential Salt, may not be brok'n, and that the Crystals may be fair and whole.

In the mean while, we have great reason to admire in the Essential Salt, the force of the acid, proportionably mingl'd and united with the volatile; in regard that making a new body with it, it is not dissolvable in cold water, but only in boiling hot, and that it separates again and Crystallizes its self as the water grows cold. However this union is not so inseparable, but that it may be brok'n by art: for besides that by putting these Crystals to the fire, and causing some portion of the acid part to dissolve in a Crucible or a Cornute, the Salt which remains, having lost its acidite and having chang'd its nature, becomes dissolvable in the water, though fix'd and permanent in the fire. This union may be also broken, by adding to these united Salts some new acid; which being not of the Nature of the former, hinders not but that they may be dissolvable in water, as they were when separated; nevertheless, without restoring its nature to the volatile Salt, which is almost equally fix'd, provided the acid do not exceed the necessary proportion.

The same union may be brok'n by dissolving this Essential Salt in water, and mixing with it Salt of Tartar, such as is prepar'd by Calcination. For by that means,

the acid being master'd by the other Salts, and not being able to close with so great a quantity, which it could neither stop, nor contain, resumes its former nature, so that they become together all of them dissolvable in water.

The principal use of Cream or Crystal of Tartar, is to cut and digest thick and viscid humours, and to dispose them to purgation. It is successfully us'd in obstructions of the Liver, the Spleen, and all the bowels; and the use thereof may be continu'd for several days, as occasion requires. It is given from a scruple to a dram, in Broth, or dissolv'd in some hot liquor.

CHAP. LXIV.

Of Crystal of Tartar Chalybate.

THE opening virtue of Vitriol Salt, conceal'd in Steel, being able very much to augment that of the Cream or Crystal of Tartar, I thought it to the purpose to put them together, and by that means to make a compos'd Medicine, called by the name of *Cream or Crystal of Tartar Chalybate*: for the preparation whereof some having bruise'd, boil'd and dissolv'd a pound of Crystal of Tartar in ten pints of water, add thereto, toward the end, three ounces of the filings of Steel, and having well stirr'd the said filings or dust, strain it hot through a woollen cloath, and after they have let the water cool, they separate and dry the Crystals, laden with the vitriolick part of the Steel, which they have dissolv'd.

Others observing the same proportion of water, Steel-dust, and Crystal of Tartar, and putting them together at the beginning over the fire, cause them to boil about a quarter of an hour, in other things observing the same method as before.

There are some, who after they have dissolv'd a pound of Crystal of Tartar in boiling water, think it enough to throw in an ounce of Vitriol of Mars, or Iron prepar'd with Spirit of Vitriol, as I shall direct in place, then letting that liquor cool, they take off the Crystals that stick to the sides and bottom of the Vessel, and keep them for use.

Some having very judiciously powder'd four ounces of Crystal of Tartar, and two drams of Vitriol of Mars, moisten them, and reduce them into paste, with about two ounces of some Cordial water; then drying it, powdring and adding to it some few drops of distill'd oil of Cinnamon or Cloves, they give it the name of Crystal of Tartar Chalybate. You may choose which of these preparations you please.

Crystal of Tartar Chalybate is look'd upon as a specifick remedy for the cure of several Chronicall distempers, and among the rest, of obstructions of the Liver and Spleen, Jaundies, quartane Agues, Hypochondriacal Melancholy, suppression of the Menstruums, Cachexies, and all distempers that come from obstructions of the Matrix. It is not us'd till after general remedies; especially Purgatives. The dose is from half a scruple to half a dram in broth, or in some other hot liquor, in a morning fasting; and it may be continu'd as the Physitian sees requisite.

CHAP. LXV.

Of Crystal of Tartar Emetick.

THE choice which is made here of Crystal of Tartar to envelop and as it were to concenter in its self the vomitive faculty of Antimonie, cannot but seem very reasonable to those, who considering that the acid part of this Crystal qualifying the violence of the vomitorie, renders the effects more gentle, so that after a vomit or two, and that the stomach is thereby discharg'd of some part of the ill humours, the rest falls downwards and works upon the matters which it meets with in those parts,

Crystal

Crystal of Tartar being the Base of this preparation, I would not place it with those of Antimony, though the principal effects of it proceed from thence. The same reason obliges me not to speak here of that which concerns the Antimony, nor of the compos'd water which is to be made use of for the preparation of this Crystal.

Take four ounces of Crystal of Tartar, and as much Crocus Metallorum, prepar'd with Salt of wormwood, as I shall direct in the preparations of Antimony, and having finely powder'd them and put the powder into a great Matras, pour upon them four pints of Aqua Benedicta of Serpoulet of Mynsich, of which I shall give you the receipt in the last part of this work. Then having stopp'd up the Matras, set it for three or four days in a Sand-bath over a very moderate fire, stirring the ingredients from time to time. Then augment the fire of the Bath, to the end the liquor may boil a little, and pass it hot through a woollen cloath, leaving the Crocus Metallorum at the bottom of the Matras. Then when the liquor is very cold, separate and dry the Crystals; after they are dry, powder them and keep them for your use.

This Crystal is one of the most gentle and most excellent Vomits that can be prepar'd. For which reason it is giv'n to all sorts of sexes and ages, and to persons the most nice and tender; and with much more safety than any other vomitory drawn from Antimony or any other Minerals. It is made use of very successfully in Lethargies, Apoplexies, Epilepsies, Ravings and Rovings of the fancy, and in all other distempers of the brain. In diseases of the stomach, Vomitings, Jaundise, Dropsies, in Quartane, Tertian, Quotidian, and continu'd Cholerick Agues. It is good also to empty the stomach of poysons and other Morbifick matters. The dose of this Crystal is from three or four to eight or ten grains, in both or in some other hot liquor.

But though this Emetick Crystal work much more gently, then almost all other Emeticks; nevertheless you must not neglect the precautions to be observ'd, when Vomits are given; of which the principal are, not to give them to persons who are subject to spitting of blood, Ulcers in their Lungs, narrow chested, their Lungs inwardly ulcer'd; nor to such as are hard to vomit, nor to women with child. You must be careful also to give the Patient fat Broth, or Flesh when the vomit begins to work, to ease the operation, and make it work more kindly.

C H A P. LXVI.

Of the fix'd Salt of Tartar, and its dissolution in Liquor.

IT is not seasonable here to contest about the fix'd quality which the Ancients and Moderns have giv'n to Sal Tartar, when they prepar'd it by the ordinary ways, making use of a violent fire. But we should do ill to believe, that this Salt was of it self such, in regard it is naturally very volatile, and that it would continue in that condition, if as I have said in another place, the volatile acid Salt, which makes one part of the composition of Tartar, did not fix it, by making a strict union with it during its calcination. This alteration however, as considerable as it is, is not at all destructive, in regard you may restore to the greatest part of this Salt its first volatility, if you free it from its chains, by separating or augmenting the acid, so that it may master it, or if you prevent its union with it. Yet their conjunction is not without a notable advantage, because that by fixing the volatile Salt, it hinders dissipation, and for that it is serviceable for several uses, where the volatile Salt alone cannot produce the same effects, not being able to withstand the fire.

You may reserve the sediment of the Spirit and Oil of Tartar, of which I have spok'n, and having calcin'd it in an open fire, extract the Salt by the ordinary ways. But they that neither mind the Spirit nor the Oil of Tartar, may put some pounds of raw Tartar into a bag of large paper, and having ty'd it fast, and laid it in water till

till it be well soak'd, put it in the middle of a Hearth of a great Furnace half full of Charcoal well kindl'd, and having cover'd it well, keep a good fire for two long hours. The fire being quench'd, the Tartar will remain calcin'd in a black lump, compos'd of an acid Salt, united with a volatile Salt which it has fix'd, and some earthy part of the Tartar which has mingl'd with it. Afterwards boil this mass in a good quantity of water, and having pass'd the Liquor through a sheet of Cap-paper, return'd it into the Vessel and boil'd it again with the sediment in fresh water, refilter'd it and mix'd the same liquor with the former, evaporate the superfluous moisture over the fire, and the Sal Tartar will shew it self at the bottom of the Vessel very white and fix'd, which you may keep as it is, in a double glass Bottle well stopp'd, or set it in the Cellar or some moist place, till it be dissolv'd into a liquor, which is improperly call'd Oil of Tartar, in regard it is only a Sal Tartar dissolv'd; the dissolution whereof you may hasten by adding only as much water as is necessary to keep the Salt in dissolution.

They that desire to make Salt of Tartar, or any other Salts of Plants, accounted fix'd, to look more white, and to preserve them in their beauty and dryness, so that the moisture of the air may neither penetrate nor dissolve them, after they have consum'd their superfluous moisture, may mingle them with about a third part of their weight of their Sulphur in powder, and cause it to burn and consume over a good Charcoal fire, and having made a Lye and filter'd it, evaporate the liquor to a film, in a glass Cucurbit over a Sand fire. Then letting the substances cool, separate and dry the Crystals, and evaporate again the liquor that swims at the top, to a film, to gain the Salt which is contain'd therein.

It is no wonder that these Salts, simply calcin'd, cannot resist the penetration of the air; for having had in their calcination as much acid as was requisite for their fixation, but not to fill up all the little intervals which the operation of the fire had left there, they have their pores open, and subject to any penetration, especially that of the air, when environ'd by it. But when they meet an acid more powerful, such as that which rises from the Sulphur, which was mix'd and burnt with them in their last calcination, they fill themselves in such sort that having no more vacuities, the acid of the air cannot break the strict union which is between them.

Not that it is the best way to expose these Salts to such strong and frequent calcinations, which cannot be done without some notable diminution of some of their best parts, and among the rest of the spiritous Sulphur, as is observable in the dissipation of the scent and flavour of the Plant, which happens always to Salts thus calcin'd, which would preserve a good part of them, if they were not so expos'd to the violence of the fire. Whence it comes to pass, that there is great reason to prefer the essential Salts, which may be drawn from Plants with a moderate and gentle fire, before those that undergo the violent fires of calcination.

Salt of Tartar is as it were a model of all the fix'd Salts of Plants. There is none more us'd, either in the one or the other Pharmacy, especially in Chymistry, which uses it not only among opening and purging medicines, and to mortify the acids which cause the fermentations in our bodies; but also in the dissolutions and precipitations of several substances, especially of Minerals. Not to mention external applications as useful to take away scars and blemishes in the face, as for specifick remedies in all diseases of the skin, caus'd by the acids.

There are some who after they have beaten equal parts of Tartar and Niter together, put the powder into a great Iron Mortar well heated, and setting it over a fire of kindl'd Charcoal, calcine the powders immediately, and find at the bottom a black Salt, which they put off for Salt of Tartar, though the fix'd Salt of the Niter make above half of it.

There is a Crystalline Salt also to be prepar'd, with equal parts of Salts of Tartar and Niter, well purify'd, dissolv'd in Rose-water heated, then filter'd, coagulated, and crySTALLIZ'd after the ordinary manner; this by some is call'd by the name of *Sal Tartar Niter'd*, very proper to open obstructions of the Liver, Spleen, Kidneys, and Ureters; as also to allwage inflammations of the mouth and throat, giv'n in proper liquors from half a scruple to half a dram.

CHAP. LXVII.

Of Tartar vitrioliz'd.

THough the boiling and great heat, which is perceiv'd in the vessel and in the substances, at the time of the conjunction of the Salt or Liquor of Tartar to the rectifi'd Spirit of Vitriol, is taken by many for an effect of the Antimony which they believe there is, between the Acids and the Alkaies; yet I dare presume to say, that the great inclination which these Salts have to unite reciprocally together, compelling them to act and react, one upon the other, with an extream quickness, and some sort of violence, is the cause of that boiling and heat which follows. For as the boiling and heat ceases, when the Salts have reciprocally penetrated and satisfied each other, so that neither happens afterwards, whatever superaddition you make of the one or the other to the two proportionally united: It would be ill done to impute that to any Antipathy, which if it were, would prove the destruction of the one or the other of these Salts, or of both together; which never happens. So that if you put the Tartar vitrioliz'd into a Cornute, and urge it with a quick fire, you shall draw forth the Spirit of vitriol almost in the same condition as when you first made use of it, and find the Salt of Tartar at the bottom of the Cornute without any significant alteration. This Effervency has urg'd some to give to Tartar vitrioliz'd the name of a Magistery, though you perceive no precipitation, in the conjunction of the acid Spirit with the fix'd Salt; but only a Coagulation which proceeds from the inward union, and corporification of the Spirit of Vitriol with the Salt of Tartar.

They are also in a great error, who fear lest the most volatile part of this Tartar vitrioliz'd, should be dissipated in that great heat and boiling of the substances, seeing it is most certain that nothing rises but an insipid water; and that reason and experience teach us, that the volatile and fix'd Salts, having a mutual inclination to join to acids, embrace them, and mix themselves both very streight and closely together; So that it is a difficult thing to separate them; as may be verifi'd in the conjunction of volatile Salts of Animals to Acids; where the heat and effervescency, though very considerable, cause nothing to ascend but a water very insipid and without scent. Though some have adviz'd the use of small funnels, to pour the acids gently upon the volatile Salts, and to stop the orifices of the Vessels, fearing to little purpose, the dissipation of one part of a Salt whose volatile nature the Acid changes in a moment into fix'd, by the strict union which it makes with it.

There is some difference in Authors about the proportion of the Salt of Tartar with the Spirit of Vitriol for the preparation of Tartar vitrioliz'd. For which the surest rule is to cease to pour the one upon the other, when the Ebullition ceases. For that is a sure sign that the fix'd Salt, and the acid Spirit have sufficiently penetrated and satisfied one another, and that they are mix'd to their due proportion.

This Salt and this Spirit is to be mix'd in a large and high glass-Cucurbit, that the Ebullition may have room enough. You may either pour the Spirit of Vitriol upon the Liquor, or the Liquor upon the Spirit. Only you must be careful to pour the one upon the other very gently, to stir the liquors from time to time, the better to unite them well, and not to pour any more, when the Ebullition ceases. At which time place the Cucurbit in a Sand-bath over a very moderate fire, and gently evaporate the superfluous moisture to attain a thin film, that you may have the Tartar vitrioliz'd white and Crystalline; or else to the total consumption of the moisture, that you may have it in Mass or in white powder.

Yet you may shorten your work very much, by putting what quantity you please of very white and very dry Salt of Tartar in powder, in the bottom of a glass-Cucurbit, pouring gently upon it as much good Spirit of Vitriol, as it can suck up, and forbearing to pour any more when you perceive the Ebullition cease. For by this means you have a Tartar vitrioliz'd very white and dry, never needing to evaporate any superfluous moisture. This preparation may also serve for a general example

example not only of the union of Alkali's with acids ; and of the great alteration which happens to their scent and their other qualities by their conjunction ; but of the change of liquid into solid ; which manifests it self in Spirit of Vitriol, which unites it self and makes but one body with the Salt of Tartar.

Tartar vitrioliz'd is an excellent digestive ; it cuts and opens. The great use of it is to open obstructions of the Liver, Spleen, and all the Bowels, as also of those of the Matrix. The dose is from half a scruple to half a dram in convenient liquors. It is also mix'd with Opiates, and among other opening and purging remedies.

CHAP. LXVIII.

Of Salt of Tartar Foliated.

SEveral Authors have treated of this preparation, under several names and methods, which nevertheless tend all of them almost to the same end or signification. Their principal end being to satiate, as I may so say, the fix'd Salt of Tartar with the acid of Vinegar, and to fill up the vacuums remaining as well in the one as in that of the Spirit of Wine, to unite them more closely together. Some advise to imbibe the Salt of Tartar several times in good Wine, and as often to draw off again by distillation the watry part, and to repeat these operations, till the Vinegar put in, distills as acid as when it was first made use of. But the following method is more short and easy.

Put the Salt of Tartar into a large glass Cucurbit, and gently pour upon it as much Spirit of Vinegar as the Salt can suck up, so that the Salt and the Spirit may find themselves reciprocally penetrated and satiated one by another, and that there be no effervency in the substances. For by this means you shall do more at one, then you could do at several times ; so that the Salt of Tartar and the acid of Vinegar being intimately united, you may easily evaporate some portion of the watry part of the Spirit of Vinegar in a Sand-bath over a moderate fire, and you shall find at the bottom of the Cucurbit a black substance, the same that would have appear'd after all the repeated operations before mention'd. Then letting the substance cool, you shall dissolve it in good Spirit of Wine, and having pass'd it through a sheet of grey paper, put it into a Cucurbit, or into a glaz'd earthen Pipkin, and evaporate the Spirit in a Bath of Ashes or Sand, over a very gentle fire, till the substance be fully dry'd. Then dissolve it again and having refilter'd it, evaporate this Spirit, as you did the former. Renew all these operations still, till you find the substance white, dry, and in distinct leaves at the bottom of the vessel ; which is the reason that some Authors have given it the name of Salt of *Tartar Foliated*, or Foliated earth of Tartar.

Salt of Tartar charg'd with the acid of Vinegar, partakes much of the virtues of Tartar vitrioliz'd. But the addition of the Spirit of wine makes some alteration. For, as the acid exceeding the volatile Sulphur, was the cause of the changing of Wine into Vinegar, so the volatile Sulphur of wine here added, qualifies the eagerness of the acid of the Vinegar, and changes the nature of the composition, whence arises a new effect and a virtue altogether particular.

In the mean time take notice that in the union of the acid of Vinegar with the Salt of Tartar, there is a precipitation of the latter terrestrial part of the same Salt, which would be otherwise almost inseparable ; and that in the dissolutions, and filtrations made with the Spirit of wine it remains in the filter, and the mass becomes perfectly cleans'd from all impurity.

You may dissolve this Salt in some Cordial water, and having CrySTALLIZ'd it and dry'd it by the ordinary ways, keep it in a double glass bottle well stopp'd ; or put it up, when you have reduc'd it into leaves ; or set it in a damp Cellar, and thereby dissolve it into a kind of purple colour'd liquor.

This Salt is of a middle nature between fix'd and volatile. It is moderately hot, and very proper to purify the mass of the blood ; and to purge gently Tartarous humours,

humours, which are the cause of several obstinate distempers. It is giv'n from five or six, to eight or ten grains; or else altogether as many drops, when dissolv'd, either in broth, or in any other proper decoction. You may make use of this Salt to penetrate and open several Mineralles, and to extract Tinctures, especially from Iron, adding Spirit of Wine, or some other Menstruum.

CHAP. LXIX.

Of the volatile Salt of Tartar.

SALT of Tartar being naturally volatile, there is no great study to be us'd to change its nature, rather we must take care to hinder the acid part of Tartar from fixing the volatile; or else find out means to separate them, when they are united and fix'd together. The Ancients and most part of the Moderns, not knowing the great inclination which the volatile and fix'd Salts have to join with acids, nor the indissolubility of their union when contracted together: we need not wonder at their ill success, in searching after this volatile Salt; and that the greatest part of Authors have rather chosen to suppress it, and thereby tacitly to testify that it was not within their knowledge, then to manifest how ill they had improv'd their time and pains, being not able to write any thing of certainty in this particular.

Certain it is that the acid and volatile Salts which are naturally found in Tartar, are not to be separated one from another, but with great difficulty; but that they are always inclin'd to unite themselves as strictly as it is possible together; especially in Calcination, which dissipates the watry part, that sensibly divided and separated their parts and manifestly closes up the terrestrial part, which serves as a means to their union. And though that by this violent fire which consumes the watry part, the acid suffer a notable diminution, yet there is enough behind to maintain the union, which they contracted, while they acted one upon the other, during Calcination. So that to break this union, by separating or surmounting the acid which remains, and keeps the volatile within its parts after Calcination, some of the Moderns make use of a new acid, to unite it self to that fix'd Salt. And that with very great reason: for the Salt of Tartar having lost in Calcination much of the acid parts which stopp'd it; and there being only enough remaining to preserve the quality of fix'd; the most fix'd part of this Salt, finds it self half starv'd for want of acid, (which happens naturally to all fix'd Salts) whence it comes to pass that swiftly uniting it self to this new acid, whose parts are ready to fill all the vacancies which the action of the fire had left empty, This new union is the cause that the more volatile part of the Salt of Tartar resumes its natural liberty and volatility, and soon makes it self manifest by its smell, and by all the marks Essential to volatile Salts. Which is not to be wonder'd at, since that to restore to the volatile Salts of Animals the volatility which the acids have suppress'd in fixing them, we have recourse to the fix'd Salts, which are only able to force the acid Salts to abandon the volatiles, to unite themselves to them: whence it comes to pass, that these volatiles disengage themselves, and appear withall the qualities of which they are capable.

The moderns direct, that after you have calcin'd to blackness two or three pound of raw Tartar, and put them into a great Iron pot, to pour common water into it, about a fingers breadth above the substances; afterwards to set the pot over a very gentle fire, and when the substances are well soak'd and only lukewarm, to strow thereby degrees about half a handful of raw Tartar finely powder'd; so that you shall perceive several bubbles to rise upon the liquors. Then continuing to strew new powder of Tartar by degrees, and from time to time upon the liquor, the Fermentation will encrease, the bubbles grow bigger and multiply, and heap together, like

* M m

Clusters

clusters of Grapes. In the mean time you are so to manage the fire, so that it may not exceed in heat those that are generally us'd for Fermentations, and to strow your powder very moderately, and not to strow too much at a time, for fear the substances boil over the sides of the vessel; and not to cast in any more powder when the ebullition ceases. After which, this liquor is to be put into a Cucurbit of Iron very large and very high, which being cover'd with its head well luted, with a Recipient well fitted and luted on, distillation is to be made in a Sand-bath over a very moderate fire, especially at the beginning, applying from time to time cold wet cloaths about the Cucurbit to suppress the boiling of the liquor: at length you must augment the fire to cause the volatile Salt to ascend, and rectify the distill'd liquor as much as is necessary for the separation of the Salt, and to have it in all its beauty and purity. These writers assure us, that this Fermentation makes so entire a division of the parts, as well of the raw Tartar, as of the Calcin'd, that after distillation, there is not to be found in the Sediment any Salt at all either volatile or fix'd.

The raw Tartar and the Salt of Tartar calcin'd, proceeding from the same substance, and being of the same nature in their original, it is a difficult thing to determine which of the two volatilizes soonest in Fermentation, especially ascending in great quantity, and none remaining among the sediment, as these writers believe. But my thoughts are, that in this confusion into which the fermentation puts the parts, to dispose them to separation; the acid of the Tartar fails not to unite it self to as much of the fix'd Tartar as it can compass, and that the portion of Salt which is united to it, is no more troubl'd to preserve its union, then that which separating from the juice of grapes in Fermentation, creates the principal parts of the substance of Tartar,

The Salt of Tartar may be also volatiliz'd by means of the black distill'd oil of Tartar; of which you may take one part, and having incorporated it with twice as much of its weight of purified Salt of Tartar, put this mass into a glass Cornute; and having exactly stopp'd it, and set it five or six months over a Bakers oven, or in any other place, moderately hot, open the mouth of the Cornute, and joyning to its beak a great Recipient carefully luted, you may draw forth in a Bath of Sand with a gradual fire a volatile Salt smelling like urine, white, Crystalline, and of a very penetrating scent, accompani'd with a small quantity of the same Salt, which is found dissolv'd into liquor, mingl'd with some little oil, almost as penetrating as the Salt it self.

Now though we may say that the oil of Tartar contains in it much of the volatile Salt, as do several other oils, and that the volatile Salt which we draw out of it may proceed from it; nevertheless there is great likelihood that the Salt of Tartar affords the greatest part of it; because the volatile Salt ascends in very great quantity, because you have more then you put in oil; and because there remains nothing but an oily coal, representing chiefly the feces of the oil, and weighing much less then the Salt of Tartar made use of. I am of opinion also that the great digestion having made an opening and division even to the smallest particles of those two substances, and brok'n the particular union of the Salt Tartar, with some portion of the acid, and some particles of earth, like to that which the oil had made with some part of the volatile Salt, and having also disorder'd all their parts and giv'n them another situation in their new union, it is easy then for the volatile Salt, and the most pure part of the oil to manifest themselves with all their qualities, and to quit these chains that have now no longer power to stop them. To which we may add that the secret ferment of the volatile Salt conceal'd in the oil of Tartar, having had time sufficient to raise and increase it self, has not only gain'd the upper hand of the acid part, but has in some measure converted it into its own proper substance, taking advantage of the conjunction of the oil of Tartar, upon which the acids have no power, not being able to unite when they are alone, and to which they cannot unite but by means of the Salts: considering also that the acids not being able without great difficulty to break the union which the Salts easily make with the oils, are forc'd to change figure, and to conform to the nature of Salts, to the end they may share in the union which the same Salts have contracted with the oils.

The use of Allum, which some of our Moderns employ for the volatilizing of Salt Tartar,

Tartar, deserves to have its place here, notwithstanding some little disputes may arise, touching the diversity of the substance of Sal Tartar from that of Allum; wherein the scrupulous will soon be satisfy'd, if they consider, that Allum yeilds nothing of evil or prejudicial, in distillation; and that the spiritous water thereof is us'd with success, given inwardly in diseases of the mouth and throat. The Moderns use this method.

They mingle three pound of Sal Tartar, very dry and well purify'd, with the full weight of raw Allum in powder; and having put them into a great Earthen Cornute well luted about, and plac'd it in a close Furnace of Reverberation, they distill it with a gradual fire, soft at first, but at last increas'd to the utmost violence of heat; by which means, when the Vessels are cold, you shall find in the Recipient very much volatile Salt of Tartar, the scent and taste whereof will be very keen and penetrating; and the spiritous water of Allum mix'd with it; which you must rectifie by the ordinary way, to have the volatile Salt in its purity and perfection.

The same modern Writers, to take away all objections against the watry and spiritous parts of the Allum, which rise with those parts that ascend from the Salt of Tartar in distillation, direct instead of raw Allum, only to make use of its *Caput Mortuum*, which after you have beaten and mix'd with an equal weight of Salt of Tartar, well dry'd and in powder, you may draw forth the volatile Salt by a Cornute, doing as you did with the raw Allum.

The Acid contain'd in Allum, is so weak and inconsiderable, that there is very little reason to attribute to it the volatilization of Salt of Tartar, but rather to its fix'd part that remains after distillation; considering that according to the opinion of the moderns, it produces this effect without any participation with the Acid. As to the reasons of the volatilization of this Salt by the means of Allum, my Opinion is, that the terrestrial Salt of the latter, being mix'd with the Salt of Tartar, meeting there the remainder of the Acid which had fix'd this Salt, and finding it self more porous and more dry then it, sucks it up, or at least diminishes it in such sort, that not being able to retain so large a quantity in its pores, it forsakes the greatest part, which being at liberty, becomes volatile as it was naturally.

I have said in another place, that the most acid substance of the juice of the Grape, unites it self with a good part of the volatile Salt for the composition of Tartar; and that the Lee that lies at the bottom of the Casks, abounding in volatile Salt and sulphury Spirit, contains but very little acid, which would not be enough to fix but very little of the volatile. For which reasons it is, that the volatile Salt may be easily drawn from this Lee; and that there is no need of borrowing foreign assistance for that purpose. To which intent, having separated by filtration and expression the Wine which accompanies the more thick part of the Lee, where the volatile Salt lies hid in the terrestrial part; and having distill'd this Wine to make advantage of its volatile and inflammable Spirit, dry the thick part very well in the Sun, or over a Bakers Oven; and having pulveriz'd it, sprinkle it with its proper Spirit, or some other well rectify'd, and having moderately moistned it, let the whole mass dry of it self, where you dry'd it before; then fill with it two thirds of a large Cornute of Pottery Earth, and having plac'd it in a close Furnace of Reverberation, and fitted and well luted to its beak a large Recipient, make distillation; beginning with a gentle fire, increasing it by degrees for ten or twelve hours to the utmost violence. After which, the Vessels being cold and unluted, you shall find in the Recipient the volatile Salt of Tartar mingl'd with the oily part, and much flegm, which you must empty both together into a large Matras with a long neck, and having plac'd it in a Sand-bath, cover'd with its head well luted, with a Recipient luted to it as exactly, make rectification with a moderate fire, using the same method as for the rectification of other volatile Salts; you shall then perceive, that the volatile Salt of the Tartar mounting first, will stick to the inside of the head in a white and crystalline form; whence it must be separated with as much art as celerity, to hinder as much as may be its separation and mixture with the oily part, which will follow next to this volatile Salt, and ascend with the Flegm, that will have dissolv'd and carry'd with it the rest of this volatile Salt.

The sprinkling of the Spirit of Wine, well rectify'd, upon the dry Lee, is not so

absolutely necessary, that the volatile Salt cannot be drawn out, but by the help of this Spirit. But there is this advantage in it, that by embracing some part of the acid of the Lee, and taking it along with it in its dissipation, it frees the volatile Salt, so that you have it in greater quantity by that means; then otherwise you could do.

The volatile Salt of Tartar is very proper to purify the mass of the blood, and to expel through the pores fuliginous and sharp humours; to mortify acids, and prevent fermentation; and to cause those humours to transpire, or else to carry them off by siege or urine. It may be successfully us'd for the cure of intermitting Agues, especially the Quartane; for the cure of Dropsies, Jaundise, Cachexies, Scurvy, and the most part of Chronical diseases of men and women. It must be taken a good while before meals, from ten or twelve grains, to twenty or thirty, in convenient liquors, or in Bolus mix'd with Conserves, or other medicines. It is very specifick to Gangrenes, taken inwardly, or apply'd to the Gangrene it self. It is recommended for the dissolution of several Minerals.

I might have here inserted other preparations of volatile Salt of Tartar; but I think I have given enough. Besides that I am very well assur'd, that the latter is no way inferior either for its truth or easiness of preparation, to any that can be added to it.

As to what remains, the examples which I have given of volatile, white, and crystalline Salts, which may be extracted according to my method, not only from the Lees of Wine and dry'd Beans, but also from any other Pulse, and many antiscorbutick Plants, may serve to rectify the errors of those, who have thought that to be true which *Zwelfer* has maintain'd in his fifteenth Classis, and his 688 page of his Royal Pharmacopœa, printed at *Dordrecht* in the year 1672; where after several discourses tending to the same end, he concludes in these words, *Quare vero visus comprobatum manet; &c. Wherefore it remains a Maximæ veræ: then Truth it self, That no substantial existing volatile Salt, can by Art be extracted from Vegetals; as from Animals it is every day done; only a fix'd Salt; and not that neither, unless incineration precede.* For the experience and trials which I have made of those things which I have prefer'd, will utterly overthrow all his assertions; and at the same time destroy all the pretended reasons which he has brought to uphold his opinion. For though it be a difficult thing to believe, that such a person as he, who has been accounted learned and experimented in his Art, should be deceived in matters that may be thought to pass so frequently through his hands; nevertheless it appears to be true, that he has not made sufficient reflections upon what he has put to the Press; and that he would not have been so positive in his assertion, had he to the bottom examin'd the nature of these very things whereof he has treated. Otherwise he might have had this, among other considerations, that Soot, which is scarcely compos'd of any thing else but the Salt and oily parts of the wood, which the violent operation of the fire has carry'd up and fix'd to the sides of the Chimney, affords in distillation by a Retort, very much volatile Salt, which cannot be accounted other then a real volatile Salt of Vegetals. And it is a convincing proof, that this Author forgot himself upon this argument; in regard that he falls into a manifest contradiction, in the same Classis, p. 19. where he undertakes, contrary to his declar'd judgment, to set down a method how to prepare a volatile Salt of Tartar, which all the world knows to be one part of a Vegetal. Though his method, very troublesome as it is, only tends to unite the fix'd Salt of Tartar with the most subtle acid Salt of the air, which he pretends to join together; and that all which he draws from thence comes nothing near to the virtues of the true Salt of Tartar, of which I have shew'd you the preparation.

CHAP. LXX.

Of Oily Volatile Salt.

THE high praises which *Sylvius*, a Physician of *Leyden*, has given to oily volatile Salt, and the frequent use which he made of it in the cure of several diseases, having rais'd in many persons a desire to know the preparation of it, may give them an occasion to complain of this learned man, in regard that having communicated to publick view so many excellent writings, yet he omits to impart a receipt, of which he makes such frequent mention therein. Nevertheless it was the judgment of some, that the consideration of those distempers for which he made use of it, and the examination of other remedies which he prescrib'd for the same, or for diseases of the same nature, might give some insight to understand what this preparation should be, and that it might be infallibly found out, by making a proportional union of oily substances with spiritous and salt volatiles. To which purpose some there are who having incorporated certain drops of distill'd Oils with fine powder'd Sugar, dissolve them in spiritous Aromatick waters; afterwards mixing therewith some volatile Salt of Animals or Vegetals. Others believe they reach the intention of *Sylvius*, by dissolving some portion of volatile Salt in the spiritous and oily water of Marjoram, Lavender, or some other Plant, odoriferous and containing a certain Oil in it. Others mix the oily Spirits of Aromaticks with the volatile Salts, or their salt Spirits, which are nothing else but the same Salts dissolv'd in some portion of Flegm. But to know the proportion of the several substances that compose an oily volatile Salt, I cannot direct you better then by imparting the receipt which *Monsieur Telingius*, Physick-Professor at *Rynel*, has communicated to us, in his Book entituled, *Prodromus Praxeos Chymiatricæ*, printed at *Rynel* in the year 1674, where you may find it, page 342.

Take, saith he, an ounce of Aromatick Spirit, (whereof he gives you afterwards the receipt) two drams of volatile Salt Armoniack, and six drops of tincture of Cloves; and having mingl'd them well in a Bottle, and stop'd them well, let the mixture stand all night, and then separate by inclination the clear liquor from the powder, that will be precipitated to the bottom; by which means you shall have a volatile oily Salt, or an Aromatick Spirit charg'd with a volatile Salt, or a volatile Salt temper'd of a pleasing smell and taste; which by reason of the fineness of its parts, is very proper to attenuate and discuss bad humours, and to expel them through the pores. It is us'd with success in all sorts of cold distempers, especially those that proceed from some acid juice or ferment, whose boiling and the effects thereof it prevents. The dose is from five drops to ten, in proper distill'd water.

The Receipt of his Aromatick Spirit is this:

— Take two ounces of good Cinnamon, one ounce and a half of red Roses, six drams of Anniseed, and as much Fennel-seed; half an ounce of Galanga-root, as much Cloves, two drams of Cardamum, as much of the seed of Barberries, two scruples of Santal Citron, as much Nutmegs, and as much of Cubebs; bruise the ingredients, all but the Roses, and having mix'd them, and put them all together into a glass Cucurbit, and pour'd upon them six pints of good Spirit of Wine, and one pint of Rain-water, cover the Cucurbit with its head well luted; then place the Cucurbit in a Sand-bath, and having fitted a Recipient to the beak of the head, digest the ingredients over a very slack fire for four and twenty hours, and then distill them, observing the same method as for the Spirits of all sorts of Aromaticks. This Spirit heats, attenuates, and dries; fortifies the heart and stomach, and is proper in all sorts of cold diseases.

The different substances of the Spices made use of in this Aromatick Spirit, might seem to require different macerations. But considering, that the most subtle parts of the Aromaticks easily separate from the grosser, the confusion, the four and twenty hours digestion, and the penetration of the Spirit of Wine, are enough to remove all scruples in this particular.

The



The Second Book :

Containing the

CHYMICAL PREPARATIONS

OF

ANIMALS.

CHAP. I.

Of Medicines extracted out of the Body of Man.

Vegitals, the preparations whereof were the subject of the preceeding Book, are not the only things which God has created for the service of Man; for He has not only ordain'd for him in several Animals, a good part of that which is necessary and proper for human sustenance; but He has furnish'd him with the means and art to extract out of every one of them in particular, several excellent remedies; and not only so, but he has given to man a peculiar knowledge of many other medicines contain'd in his own Body in his life time, and in the Bodies of other men after their deaths, far superior to those that are comprehended in the bodies of any other creature whatsoever. So that Chymistry need not want work, while busied in those copious Preparations which include not only the Skull, and other Bones of Men, the Blood, the Fat, the Flesh, and Mummy, which is the Body embalm'd and dry'd, but also the Nails, the Hair, the Urine, and other Excrements, even to the very Secondines of Women. So that it may be said, that there is not any part or excrement, no superfluity in Man or Woman, which Chymistry cannot prepare for the cure or ease of the most diseases and pains to which both are subject.

Artists extract from the parts of Man and Animals, substances not much unlike to those of Plants though not in the same proportion; for Animals have less of Earth, less of Acid, and much more volatile Salt then they. Animals have also much more Oil then some, and less then others. The little Acid which is contain'd in Animals, and consequently the want of power to put a stop to more then some small quantity of the volatile Salt that very much abounds in quantity, is the reason that we must not wonder that when there is nothing to hinder it from abandoning the other substances, there should be so little trouble to separate it, and to make it come forth in the first place into the Reecipient, then to ascend from the bottom of a Matras with a long neck to the top of the head in rectification, as will happen in the making of the preparation.

As to what concerns the Oil, being of it self volatile enough, and participating very

very much of the nature, and also of the proper substance of this Salt, it so falls out that the oil follows next as well in rectification as in distillation. I say moreover that though there be Animals which eat one another for their nourishment, and that man himself, lives in part upon the flesh of several Animals, yet we must look upon the Plants as the most considerable, and principal nourishment of the most part of Animals, especially of those that serve for the food of men; and believe that it is from the volatile Salt of the plants, that the most part of Animals, especially men, receive theirs. We are also to believe that the quality and quantity of the volatile Salt of Animals proceeds from the exaltation which the natural heat of the stomach makes of the substances which serve for their nourishment; and that this volatility is absolutely necessary for them, to the end they may be quickly and equally, as they are, convey'd to the remote parts from the stomach, as well as to those which are near it. Nor is there any doubt but that the principal parts of man, are abundantly furnish'd with volatile Salt, in regard that not only the parts that are without sense, as the Nails and Hair, but also the most vile excrements of the body contain in them a very considerable quantity.

CHAP. II.

Of the preparation of Mans Scull.

I Cannot well approve Ustion or Calcination of a mans scull, nor the magistery which some Authors direct us to make of it; in regard it cannot be burnt or calcin'd without dissipating the best parts, nor reduc'd into a Magistery without depraving the virtues of it. And therefore I will not trouble my self to set down the description of it, being absolutely of opinion, that it would be much better to rasp the scull and make it into powder, according to the Galenick method, then to use other destructive means, so far from the true preparation of so good a remedy; it being impossible for a calcin'd scull to have any other considerable virtue, but only to mortify or suck up certain acids.

The best Chymical preparation that can be made of a mans scull, is that of its distillation. For which purpose having got two or three sculls of men hang'd or put to some other violent death in a healthy condition of body, bruise or saw them into small pieces, and put them into a Cornute of Potters-earth very well luted, never minding whether it be more or less full, in regard the distillation may be equally made, provided the rest of the operation be regular. Place this Cornute in a close Furnace of Reverberation, and having cover'd it with its Duomo, and lighted in the ashes hole a soft Charcoal fire, shut the Register of the Duomo, the door of the fire-place, and that of the hole for the ashes almost quite close, and keep an equal soft fire for two hours, or till you perceive the Duomo to be never so little hot: at which time remove the fire out of the Ashes-hole into the fire place; and having increas'd it a little, fit a large Recipient to the beak of the Retort, luting the closures very carefully, and giving sometime after never so little air to the Register of the Duomo, and so continue the same fire for two hours, or till the Flegm begin to distill into the Recipient. Then giving a little more air, and increasing the fire one degree hotter, you shall perceive the volatile Salt Spirits accompany'd with the oil to come forth out of the Cornute in white Clouds. Then keeping an equal fire for two hours longer, increase it one degree of heat more, opening the Register of the Duomo more and more by proportional Intervalls; till at length having set it quite open, and augmented the fire to the utmost degree of heat, continue it so till no more Clouds coming out of the Retort, the Recipient is become altogether transparently clear. At which time let the Vessels cool, and then unluting them you shall find the Oil, and the Spiritous Salt and volatile part of the scull together with much Flegm descended to the bottom of the Recipient. Of which several substances make a Rectification, by putting them together into a Matrafs with a long neck plac'd in a Sand-bath, and cover'd with its glass-head perfectly well luted, observing the same method as for the volatile Salts of Vegetals.

Some

Some there are that separate the oil from the other substances before Rectification, filtering the two latter substances through a sheet of course paper, upon which the oil stops, and which they reserve alone for external uses; not considering that this oil contains in it very much volatile Salt, that the qualities and vertues of it are almost the same with those of the Salt, and may be employ'd for the same internal uses, especially being well rectify'd. Which is the reason that it is much better to leave it with the other substances in Rectification.

The same Authors thinking to rectify this volatile Salt the more exactly, give direction after the Salt and watry liquor is put into a Matraass with a long neck, to pour upon them by little and little through a small glass Funnel Spirit of Salt, till the Ebullition cease; pretending, after they have filter'd and put the liquor into a glass Cucurbit cover'd with its head, and made the watry part to ascend by a Sand-barh, to raise the volatile Salt to the head or to the sides of the Cucurbit, being fix'd by the Spirit of Salt. But they have not well consider'd of the action and reoperation of that acid Spirit with the volatile Salt; nor did they foresee that being by that reciprocally fix'd, the volatile Salt is no more in a condition to raise it self. Considering that by their own confession, they cannot after that effect what they aim at, but by adding and uniting to those Salts so mingl'd, double their weight of Salt of Tartar, or some other Alkali of the same Nature, which by uniting it self to the acid may give the Salt it's former liberty.

All Authors who have wrote of the skull of man, simply prepar'd, have highly recommended it for the cure of all diseases of the brain, and particularly of the Apoplexy and epilepsy. But the oil and volatile Salt of the Skull, being not only freed from their earthy and watry part, but highly purify'd by Distillation and Rectification, are capable of producing effects incomparably more powerful, of which the smartness and penetration of their flavour and smell are unquestionable marks. Besides, we are to understand that the heat of the stomach causes them to pass with as much ease as swiftnes, not only to the brain, but to all the most remote parts of the body. The oil as well as the Salt may be both taken inwardly. But the Salt is to be preferr'd, because it is a little more volatile, more pure, more lightly, and less displeasing to the tast and smell. The dose is from six, eight, and ten grains, to twenty and thirty in some water, decoction, Conserve or Cephalick Opiate. The dose of the Oil rectifi'd is from two or three drops to eight or ten, in some liquors, Conserve or Opiates. But it must be incorporated first with fine powder Sugar, if you intend to unite it well with those liquors. You may also use it to anoint the Temples, or the futures of the skull, or put it up into the Nostrils.

Substances very much like to those which are extracted from the skull of Man, may be drawn out of all the bones, observing the same method in their distillation.

You may also prepare an Extract or an Essence of the skull of Man, according to the following direction. After you have rasp'd very small some pieces of the skull, put them into a Matraass, and pour'd upon them Cephalick Magistrial Spirit of Wine, as I have order'd it in the last part of this *Pharmacopœa*, till it rise four good fingers above the Powder, stop the Matraass carefully; and having set it to macerate for fifteen days over a Bakers oven, strain and squeeze out the liquor strongly in a Press, and then putting it into a Cucurbit with its head well luted, place the Cucurbit in *Balneo Maria*, and fitting a small Recipient to the beak, draw forth the Spirit till the liquor have acquir'd the consistency of Honey, then put up both the one and the other in proper vessels.

Some make use of distill'd Vinegar for this Extraction, though it be very ill done, for it changes the nature of the volatile Salt of Mans skull by fixing it. Nor is there any fear but that the Spirit of Wine will sufficiently penetrate the substance of the skull so rasp'd, without any need of Spirit of Vinegar, or any Corrosive, since we see that the juice and the most pure substance of Harts-horn easily dissolve in the water, where you have boild the shavings, though more grossly rasp'd then the mans skull is wont to be.

This Essence or Extract is commended for the cure of the Epilepsy. It is giv'n in some Cephalick water from half a scruple to half a dram. You may also mingle with it, from half a scruple to a dram of the water drawn from the Extract.

CHAP. III.

Of the Chymical Preparation of Human Blood.

I Am not of their opinion, that the Blood of Man, gulp'd down warm as it runs out of the Veins, is a specifick remedy against the Epilepsie. For besides the detestation of such a cruel Beverage, and that the Blood running from the person let blood, does not contain in it any part which is not like to those of the Blood of the person which is to drink it; we are to believe, that the Blood, being once out of its proper Vessels, alters extremely in an instant, how careful soever we might be to preserve it in its natural condition; and that it would be so far from being convey'd into the Veins or Arteries, just as it was swallow'd, that it would change its nature in the stomach, and lose both its colour and its natural consistence. So that there is no reason to expect from it any other effect then what may be expected from ordinary food.

But by the way of distillation, and separation of the pure parts of Human Blood, most effectual remedies may be prepar'd against the Epilepsie, and all diseases of the Brain, and that by the following directions.

In the month of *May* take a considerable quantity of healthy young mens blood, let blood in that season, who are not red hairs. Put this blood at the same time into one or more Cucurbits of Earth, of which three quarters must be empty, and having fitted to them their heads and their small Recipients, draw off all the watry part in an Ember-Bath with a moderate fire, till that which remains in the Cucurbit be quite dry, but not burnt. To which purpose you must have great care of the fire, especially at the end. Then having cool'd the Vessels and put up the distill'd water, put into a great glass Cucurbit the dry blood in the other Cucurbits, and having set the Retort in a close Furnace of Reverberation, and fitted and luted to it a large Recipient, make a new distillation with a gradual fire, soft at first, but afterwards very violent, and by that means you shall have a new water with the Oil, and the volatile Salt will presently follow and accompany, issuing out of the Cucurbit in white Clouds, and dissolving themselves into the Recipient. Then letting the Vessels cool, turn out all the substances in the Recipient into a Matras with a long neck, cover it with its head exactly luted; lute also a small Recipient to the beak, and make a rectification in a Sand-bath with a moderate fire, according to my former directions for volatile Oils and Salts of Plants. This rectification may be also repeated, if you desire a more exact purity.

These are some, who observing that the water drawn from blood, distill'd in a Cucurbit, is of no great virtue, only spread the blood upon several Plates, and let it dry in the Sun, or in some Stove as quick as they can, after which they distill it in a Retort the ordinary way.

All Writers extol the volatile Salt of Mans blood for the cure of the Epilepsie. *Halsm* also affirms, that the use of it cures persons that are grown in years. It is also very effectual in all other diseases of the brain. It purifies the mass of the blood, especially in Scorbuticks, making it fluid, and helping circulation. It is very proper to suppress and dissipate vapours that rise from the Stomach, Spleen, and other Bowels. It is no less effectual against the vapours of the Matrix; to contend with the malignity of Fevers, though contagious, as also for the cure of the Dropsie, and to ease the pains of the Gout. The virtues of this volatile Salt and rectify'd Oil, are very like to those which are drawn from the Skulls of men. The rectify'd Oil is also made use of in external unction of those that are troubl'd with the Gout and Rheumatism, and of great advantage against the Palsie.

The blood that flows from women after labour, is distill'd according to the same method.

I might here speak of Tinctures, Extracts, and other Preparations of Mummy, which some Authors have set down and very highly commended. But I think that these two preparations of Human Blood, Mens Skulls are incomparably much better for all intents and purposes, being drawn from parts that have suffer'd no dissipation, then such whose operations must be upon subjects that

that have receiv'd great alterations by the injury of time, or the deceit of Men.

CHAP. IV.

Of the Distillation of Urine.

THE salt and smart taste of mans Urine, and its strong smell, especially if it be kept awhile, make it manifest that all the parts of the Body out of which it was made, abound in volatile Salt, since there is so great a quantity in this excrement. We usually make choice of the Urine of young men that drink Wine, as being to be prefer'd before that of any other persons; but we proceed variously in the extraction of the volatile Salt. For we may putrifie Urine in Horsedung for thirty or forty days, the better to separate its salt volatile parts. And then having pour'd out by inclination the liquor that swims above the sediment, make the distillation in *Balneo Maria*; or in an Ember-bath, with a very moderate heat, and rectifie afterwards the distill'd liquor three or four times, making use of a Matras with a long neck for the last rectification of the Salt. But though this method may be very well follow'd, yet the noisome smell which the Urine contracts in putrifying; and the long time this preparation takes up, have made some Writers to leave out putrefaction. For now they only evaporate the superfluous moisture of the Urine in a *Balneo Maria*, or a bath of Ashes, over a very moderate fire, till it be become as thick as a Rob. Then they distill it in a Sand-bath, in a large high Cucurbit, cover'd with a head well luted, and a Recipient also luted to it in the same manner. Then they rectifie the distill'd liquor in the same Bath, in a long Matras, cover'd with its head carefully luted; and they draw from it a volatile white crystalline Salt, very penetrating, attended by a liquor almost as subtle and penetrating, which is only the overplus of the volatile Salt dissolv'd into a small parcel of Flegm, which they keep apart in double glass bottles perfectly well stopp'd.

The volatile Salt of Urine powerfully mortifies the acids that usually raise the fermentations in our bodies, and are the causes of several diseases. It is very much esteem'd against all obstructions of the Liver, Spleen, and Mesentery; to purifie the mass of the blood, cure the Scurvy, Cachexies, Jaundise, and Hypochondriack diseases. It is prescrib'd with good success in Lethargies, Apoplexies, Epilepsies, and Convulsions, as also in suffocations of the Matrix. It is highly commended against difficulty of making water, to dissolve the Stone in the Reins and Bladder. The Salt of Urine also that distills like a Spirit, is us'd to extract the tincture of divers Stones; and of calcin'd Flints, and in this preparation it becomes blue. And this is ascertain'd to be a specifick remedy against the difficulty of making water, being given from a scruple to a dram in some proper liquor. The Salt of Urine is also steep'd and us'd in Liniments to assuage all sorts of pains, especially those of the Gout and Rheumatisms. The Salt of Urine is given from ten or twelve grains to twenty or thirty, in white Wine or some other liquor. It is also given against suffocations of the Matrix, to dissipate the vapours that arise from the lower parts, and to surcease the symptoms that happen in diseases of the head.

Mans Dung, to which some have given the name of Western Civet, when being dry'd in the Sun it has lost its smell, and acquir'd a good scent, does not want its virtues. For being distill'd in a Retort, with a gradual fire, it affords an Oil that is particularly recommended for the cure of ulcerated Erysipelas, scald heads, and all manner of scurfs and scabs. It is also good to mortifie and kill Cancers, and to assuage the pains of the Gout, being apply'd to the part.

I might here recite the several distillations of the Fat, Hair, Nails, and many other parts and excrements of man; but that I fear to tire the Reader, considering that their preparations are not extraordinary, and that the instructions and examples which I have already given, together with those which I shall mention in speaking of other Animals may suffice, and satisfy them who have any knowledge of Chymistry.

CHAP. V.

Of the Distillation of the Viper.

THE distillation of Vipers is the best and most usual preparation that Chymistry performs. All the parts of the body may be made use of, or only such as you like best; considering that you extract out of all the same flegm, the same Oil, and the same volatile Salt. It is only better to dry in the shade those parts which you intend to distill, then to put them into a Retort with all their moisture; which would very much exceed that which usually comes forth in the distillation of the dry ones. Take then the heads, the tails, the hearts, the livers, the trunks, the skin, and if you please the far, the kidneys, and all the entrails of many Vipers, male or female, and having cut all their parts into small pieces, fill a large Retort of glass or earth almost quite up to the top, well clos'd with lute, then having plac'd it in a Furnace of Reverberation cover'd with its Duomo, fitted a large Recipient to the beak of it, and shut up the Register of the Duomo, and the door of the fire-place, kindle a gentle fire in the Cinder-place, and keep a fire for two hours, only to heat the Retort and the Furnace; then removing the fire into the hearth-place, keep the fire in the same heat for two hours longer, at the end whereof encrease the fire one degree, giving never so little air to the Register of the Duomo; and having continu'd the fire so for two hours more, encrease the fire to the third degree for the same time. After which, having set the Register of the Duomo wide open, give the fire its utmost violence of heat; and continue it so till nothing come out of the Cornute, and that all the vapours in the Recipient be converted and dissolv'd in Salt or Liquor. At which time cease distillation. Then let the Vessels cool, and unlute the Recipient, and when the Salt is well dissolv'd in the liquor, pour it out into a Matras with a long neck, and having plac'd it in a Sand-bath, and cover'd it with its head, and luted a small Recipient to it, make rectification of it with a gentle fire, and you shall see the volatile Salt white and crystalline, mount to the top of the head, which is to be put up in a double glass Bottle carefully stopp'd, and continuing rectification, separate and keep apart the Oil, and the rest of the volatile Salt, dissolv'd in some portion of the flegm, that dropt forth together into the small Recipient, rejecting at last, that which lies at the bottom of the Matras, after you have caus'd all the volatile Salt and oily parts to ascend.

As for that which remains in the Cornute after distillation of the Vipers, it may be easily perceiv'd by the volatile Salt and other substances drawn from thence, that there is nothing considerable remaining behind, and that the small quantity of fix'd Salt which might be met with there, is not worth the trouble, and therefore it is better neither to imitate the Ancients nor the Moderns, who not understanding the extraordinary quantity of the volatile Salt of these Animals, thought to do wonders by making use of calcinations to extract forth a Salt, which the same calcination had dissipated.

The specific quality of the volatile Salt of the Viper, to overcome the venom of the biting of the Viper, or of any other sort of Serpents, and many other creatures, is not the only virtue it is endued with, as being a sovereign remedy against the Pestilence, the Measles, and the small Pox, all sorts of malignant Fevers, and epidemick distempers. It is an utter enemy to all putrefaction, curing Agues that are caus'd thereby, as are the most part of intermitting Agues; and mortifying the acids which it meets with, it is a wonderful specific against a Quarran Ague. There is not a medicine to be found more proper to purge the mass of the blood, to give it its natural fluidness, and help circulation; whence it comes to pass, that it is very proper to cure Scorbutick diseases, and to cause the transpiration of those sharp and fuliginous humours that cause Scurs, Scabs, Erysipela's, Itches, scald heads, and all diseases of the skin. It is the most powerful remedy in nature for the cure of the Leprosie, the spots whereof are upon the back of the Viper, and seem to bear its signature. For it opens, penetrates, cuts, attenuates, expels thorough the pores, and drives to the very extremities of the body, the impurity that infects the mass of the blood, and all the habit of it. It very much assists and fortifies nature,

ture, and disposes her to perform all her functions as she ought. For by the means and help of this Salt she sends necessary nourishment to all the parts of the body, as also to those that are deprived of it by some accident, and expels by Urine, Stool, and other means, all the ill humours of the body. It opens all the passages of the head, and frees it from cold and viscid flegm, that hinders the communication of the Spirits. So that it is of wonderful use in Lethargies, Apoplexies, Convulsions, Palsies, and other cold diseases of the head. No less useful is it in swoonings, and palpitations of the heart, in Asthma's, Plurisies, new and old Coughs, and other maladies of the breast. It strengthens the stomach, and helps digestion. It opens obstructions of the Liver, Spleen, and all the bowels. It dissolves coagulated blood, and prevents internal Apostemes, especially at their first growing, as also external, being apply'd thereto, or else the Oil alone. In a word, there is hardly in all Physick a more universal medicine, or that can afford quicker or more effectual relief to any disease. The dose and manner of using, both internal and external, are very much like to those of the volatile Salt of mans Skull; and so it is with the Oil, whose virtues it very much imitates.

Now though the volatile Salt and Oil of Vipers drawn through a Retort, be the most essential part, and that there remains in the Cornute but only a little fix'd Salt, very deeply mix'd with the terrestrial part of the Viper; yet they that desire this fix'd Salt may compass it, if after they have powder'd that residue, which is as black as a coal, they put it upon a Tyle, or some other Vessel in a Potters Oven, and there leave it till it be thoroughly calcin'd. For after that, by making a Lye, filtering it, and evaporating the moisture, the fix'd Salt will appear at the bottom of the Vessel, though but a very small quantity, while the terrestrial part, which is a real *Caput Mortuum*, remains behind in the filter. The virtues of this Salt are much inferior to those of the volatile, of which it neither has the smell, penetration, or savour. For it has a taste like Lye, and leaves a kind of a biting tartness in the mouth, which the other does not; yet it may be mix'd among purgative and diuretick medicines.

As to the fixation of volatile Viper Salt, which has been attempted to have been done with acids, and among others with Spirit of Salt; though it be of no great necessity, yet it may be of some virtue and use upon some occasions, and especially for persons who have lost their taste, and for want of acids, have wat'rish and unfavoury relishes in their mouths. For though we may say, that the savour and shape of Salt thus fix'd very much resembles Bay-salt, nevertheless it is not one and the same thing, for the volatile Salt, as much alter'd as it is to outward appearance, keeps its own nature entire, as appears by this, that mixing it with double its weight of Sal Tartar, or any other fix'd Salt, and putting them into any proper Vessel, it sublimes with its first force and purity, while the acid of the Spirit of Salt having quitted it, to unite it self to the Tartar, remains at the bottom of the Vessel with the same Salt, the little use of this volatile Salt of fix'd Viper, and the easiness to fix it in a moment upon any occasion, by mixing it with some acid, are the reasons why I do not set down any particular preparations here. For it is enough only to pour upon this volatile Salt by degrees a small quantity of Spirit of Salt, while it is dissolv'd in its own flegm, and to continue affusion, till the Ebullition cease, and then to evaporate the superfluous moisture till it be as dry as Salt.

I omit several Salts, Essences, Extract, and Opiates of Vipers, with several other Chymical remedies of which Vipers are the foundation; fully believing that there is in the volatile Salt of Vipers a full collection to be had at all times in a short abridgment of all that can be expected from the trouble of so many other preparations.

As to the contests that have happen'd touching the Vipers venome, which I attributed to only incens'd or inrag'd Spirits of that Animal; though I think I have explain'd my self enough upon that subject, as well in my first, as in my second book of Experiments upon the Viper: yet I cannot but speak my thoughts upon what *Monsieur Denis* has utter'd in his *fix'd Memorial* of the Arts and Sciences, in reference to these two Treatises, immediately after I publish'd the last. For though he seem'd very earnest to see my book, that he might make his reflections upon it, and seems to profess a great deal of sincerity. Yet the Event makes it appear that he has neither consider'd my book, or rather, not so much as read it, but out of a design to suppress what is most material in it: and to elude whatever he thought to the prejudice of *Monsieur Redi* who had wrote against my opinion.

In short this Author shews himself highly prejudic'd against me in favour of *Monsieur Redi*, to whom he gives the Title of first Physitian to the Duke of *Tuscany*, to to give the honour of a borrow'd dignity. For not content to suppress the very Title of my very second Book, he attributes to him all that I have writt'n against the passages of the Gall, through which the Ancients pretended that the yellow juice was convey'd to the Gums of the Viper; and shews his prejudice yet more, while he would set up that *Italian* Physitian for the Author or Inventor of the slimy kernells of the Viper. Though in his own writings he never talks but at random, and by conjecture of two slimy kernells only, which he imagines to be fix'd under the vesicles of the yellow juice, where there are no such things. Whereas I have shew'd in my first Book, by the exact descriptions which I have giv'n, and draughts which I have caus'd to be drawn to the life, that there are a great number of kernels cluster'd as it were in a heap together behind the holes of the eyes, and upon the sides of the Temples of the Creature, far from the bottom of the vesicles, and that *Monsieur Redi* is extremely deceiv'd in his pretended discoveries, and that without doing me much injustice as *M. Denis* has done, he cannot deprive me of the advantage of having been the first inventor of those kernells.

But it is evident that he had no other design in his Memoires, by maintaining the situation of the slimy kernells under the bottom of the vesicles, then to defend against all truth, the opinion of *Monsieur Redi*, concerning the pretended malignity of the yellow juice; for were he not wedded to the worst party to the prejudice of experience, he need not have had his eyes to have undeceiv'd himself, and to have brought him to reason. Whence it appears, that it is merely out of cunning when he says he is of my opinion touching the nature of the Gall, which is nothing to the controversy, to insinuate more dextrously that he is not of my opinion, as to the nature and qualities of the yellow juice; taking no notice of my convincing arguments, to justify that it is nothing venomous, nor of the experiments which I have publish'd, and which were try'd in publick, whereas *Monsieur Redi's* are only particular and upon his own report.

But this is not all, for *Monsieur Denis* not content to suppress, as much as in him lies, whatever he observ'd in my last book disadvantageous for *Monsieur Redi*, he goes about to betray truth it self, and to father opinions upon me which I never so much as thought of. But not being able to do that fairly, he takes upon him to quarrel about Terms, pretending that when I spoke of enrag'd Spirits, I meant a substance purely spiritual, and that by the Idea of vengeance and anger, which I attributed to Vipers, I meant that those creatures had passions like to those which are rais'd in men, upon violent changes that happ'n in their Animal Spirits. But this trick takes little or no effect among rational men. For no man can think by my discourses that I ever question'd but that the venome of the Viper was a material substance, but that I thought it so fine and subtiliz'd, that not falling under the discernment of sense, it might with reason be call'd Spiritual, or to say better Spiritous, to distinguish it from the yellow juice whose parts are discernable enough. So that by *enrag'd Spirits* I meant the most subtiliz'd and most agitated part of the humours, that unite together and separate themselves from the Mass in that violence of action, through an extraordinary impression which the objects make upon the body. And when I averr'd those Spirits had no determinate place, when the Creature was unprovok'd; I thought it but rational, because perhaps they might not be then in being, or if they were, they are so mix'd with the rest of the humours that they have no particular place, but only when they unite from the rest and ascend to the brain when the Creature is provok'd. However had I not thought them local, I could never have affirm'd that they pass from the throat of the Viper that bites into the blood of the other Animal, where it causes all that disturbance which is remarkable.

But all men of judgment may easily understand that I made use of those figurative speeches, that I might the better clear my thoughts to the apprehension of all the world, intending by the word *Imagination* only the Organick part of the brain of that Animal, where these Spirits separated from the rest of the blood muster themselves up together. By the *Idea of Vengeance*, their flying to the Organs appropriated for their defence; and by *Choler*, the tumultuous and violent agitation wherewith those little bodies pass from one body to another. And when I said that this venome looses it self when the anger of the Creature is over, I meant no other but that the violent motion of the humours ceasing, they recover their natural

natural condition, and ceasing to be enrag'd, are not able to separate themselves, to work those tragical effects which are the consequences of their commotion.

So that it is no wonder, that *Monsieur Denis* having suppress'd my real Experiments, should obtrude upon me such as never were in my thoughts to make or put down in writing, when he affirms it to be one of my observations, that in swallowing the blood of the Viper, or by pouring it into a wound, no unhappy accident fell out. But it may be observ'd that integrity is not the thing which he aims at in his writings, and that he rather chooses to vent whatever comes into his thoughts, then to trouble himself with the examination of truth. Had he only made a succinct repetition of what he found most remarkable in my experiments, and recited in short the reasons that confirm my opinion, as the Gentlemen of the Academy of London have done me the honour to do, he had done me but justice; but that was not his purpose; for to favour the part which he has chosen to defend, he has attributed to another that which belongs to me, and overturning the whole sense of my writings talks of that which is not material, with saying a word of that which was most conducing to knowledg. So that I have the same reason to give him the same rebuke as formerly *Martial* gave *Posthumus*, his Advocate, who instead of pleading his cause about the three Goats which his neighbour had stol'n from him, talk'd about the bush, of nothing but *Sylla* and the war of *Mithridates*. Since that instead of keeping close to the truth contain'd in my books, of which he undertook to speak, he has suppress'd them to speak of *Monsieur Redi*, and attributing that to him which was in truth mine he has alter'd the property of his friends writings, and drawn consequences quite contrary to the sense and meaning of the Author.

In the mean time neither the ill grounded opinions, nor irrational writings of any of Mr. *Redi's* Copartners, shall ever make me change my opinion touching the Vipers venom lying in the enrag'd Spirits, excluding the yellow juice and all the rest of the parts of the body. The great number of trials which I have made thereof, and my own reason, will not permit me to doubt any farther upon this subject, and more effectually convince me, then any other writings which they have publish'd either before or since mine.

CHAP. VI

Of the Chymical preparation of Harts-horn.

THE great eagerness of the Hart to devour Vipers, whose parts are so subtle, his swiftness, his Annual renewing of his Head, and the great age which he lives, make it manifest that this Creature is endu'd with very considerable principles of life, and that consequently his parts must be very useful in Physick. We see that his body affords a good number of Medicines both to the one and the other Pharmacy; and that Chymistry finds work enough to exercise it self upon, especially in relation to the Horns, the various conditions whereof require variety of preparations. The first time proper for the preparation of these Hornes is from about the middle to the end of the Spring. For then it is that they abound in subtle and volatile parts, which not being able to afford sufficient nourishment to those of the preceeding year, loosen them from their place, and thrust out others in their stead, at the same time almost that the sap rising in the Spring up into the Trees, produces fresh leaves and fruits instead of the growth of the former year. The subtle and volatile parts abounding very much, thrust out in a short time small shoots, very tender at first, and indeed for some weeks, as being full of a sanguinolent juice; but which hard'n from day to day, growing bigger and bigger from the beginning of the Summer, till they have attain'd their full growth, and that their time comes to fall off again.

Take these young Shoots when they are about seven or eight Inches high, and having cut them into slices about the breadth of a half Crown put them into a glass Cucurbit

cucurbit, and set it in a *Balneum Mariæ*, and having luted a head and a Recipient to it, distill the liquor with a moderate fire, till the pieces are become dry. This is call'd Harts-head water; and is very much recommended for the furthering of women in Travel. It is good also to fortify the heart and noble parts against malignant Fevers. You may make double advantage of the pieces that remain in the Cucurbit. For having beaten them to powder, keep it apart, or put them into a Cornute of Earth, and having plac'd it upon a bed of Sand in a close furnace of Reverberation, and fitted and luted a large Recipient to the beak, make the distillation with a gradual fire according to the rules. For by that means you shall have a volatile Salt, an oil and much Flegm, which is to be rectify'd afterwards in a Matras with a long neck, like the volatile Salt of Vipers. The water of Harts-head is to be tak'n at a distance from meals, from a spoonful to two. You may also at the same time add to the same dose, a scruple or half a dram of the powder, or from four to seven or eight grains of the volatile Salt.

Ustion was the usual preparation which the Antients practiz'd upon Harts-horn; and of which some of our Moderns make use, though to very little purpose, unless when the Terrestrial part is only desir'd, and that you have no need of the oil or volatile Salt, which are dissipated by Ustion or Calcination. But though this be rather a destruction than a preparation, the necessity which there may be of the Terrestrial part in several Rectifications, as also in that of its own volatile Salt, or else to serve as a remedy to bind and mortify Acids, occasions me to say, that to have it in that Condition, after you have saw'd the horn in long peices, you may set them upon a Tile in some Potters oven, and there keep them while the Pots are bak'd, till they be calcin'd to whiteness. You may also calcine those pieces in a close Furnace of Reveration, putting them between the Cornute and the Duomo, and leaving them there during the distillation of some corrosive Spirits, especially of Vitriol, which requires a long continuation of the fire. The Harts-horn being thus calcin'd, it is enough to powder it grossly, if it be only for Rectifications. But if it be to be tak'n alone, or mix'd with other astringent remedies, it must be ground upon Porphyry, moistning it with some Cordial water, as you grind precious Stones, till it be scarcely to be felt.

At this day we use another Calcination of Harts-horn much less destructive, which is call'd the Philosophical way, by reason of the gentle and industrious men by which they bring it to perfection. To which purpose after the Harts-horn is saw'd into long peices, they tie every one of the peices at the end with a pack-thread, and fasten the pack-thread to a stick of a sufficient length, and lay them a cross within side of a large Refrigerant of Copper tinn'd within, so that the long peices of Harts-horn hanging down in the neck of the vessel may for so long time as is requisite, receive the vapours of the liquor boiling that ascend from the vessel, where Carduus, Scabious, Bawme, or any other Cordial plant is distilling. But because the Harts-horn must receive these vapours for three or four days together to be thoroughly calcin'd, and the distillation of an herb cannot endure so long, it must be hung again over new distillations of the same nature.

Now the volatile Salt of the Harts-horn being inwardly and closely united with the other parts, and with them constituting a very solid body, the vapours of the boiling water cannot well make any great dissipation: whence it comes to pass that though they carry along with them the watry and muscolaginous part, yet neither the oil, nor the volatile Salt suffer any considerable dissipation so that there remains a very considerable quantity of both after Calcination thus order'd. So that it is incomparably better then that which is calcin'd by a violent and immediate fire; which consuming all the volatile leaves only the Terrestrial part, and that little Salt which the acid of the Combustible matters has fix'd.

This Harts-horn is as white and easily powder'd as the first. It may be also ground in the same manner upon Porphyry, and serve for the same uses from half a scruple to half a dram, and sometimes a whole dram, mixing it in proper liquors, or among other Medicines, especially if you design to close up, and strengthen; to mortify acids; resist poisons, or kill worms.

Nevertheless we must believe that Harts-horn simply rasp'd, and powder'd, not having pass'd the fire, nor suffer'd any dissipation of its good parts, is yet better then Harts-horn calcin'd Philosophically, especially if you have no design to qualify acids.

As for Magisteries of Harts-horn, which some Authors have describ'd, in regard they are not made, but by dissolving and precipitating it with corrosive Spirits and Salts, which, by their violence destroy its best parts, I think it far better to let those preparations alone, and to use in their stead, Harts-horn rasp'd, and finely powder'd.

The separation of the most pure substances of Harts-horn from the impure, are the most advantageous preparations that can be made of it. For that purpose having saw'd it into small pieces, distill it through a Cornute in a close Reverberating Furnace, with a gradual fire, as in the distillation of mans Skull; in the same manner the distill'd substances may be rectify'd. But because the volatile Salt is chiefly sought for, besides those ways which I have prescrib'd for the distillation of mans Skull, you may mix it with Harts-horn calcin'd and grossly powder'd, and so rectifie it three or four times; that leaving there behind all its impurities, and the smell of the Empyrema contracted in distillation, it may ascend more pure and more white into the head, and be in a condition to be longer kept, in a double glass Bottle well stopp'd. The doses and uses of the volatile Salt and Oil of Harts-horn are the same with those of mans Skull.

Harts-horn calcin'd, and very grossly powder'd, is properly made use of, in the distillation of Marrow and Suet of a Hart, or mans Fat, and all the unctuous parts of Animals, by melting those substances over a gentle fire, and incorporating with it as much as that can suck up, and afterwards putting them into a Cornute, and distilling them in a close Furnace of Reverberation, with a gradual fire, but much more violent then that which is us'd for the distillation of the same Harts-horn.

Pieces of Ivory may be distill'd through a Retort, in the same manner as Harts-horn, and a volatile Salt and Oil drawn out of it, the virtues whereof are very like those of Harts-horn. Then you shall find in the Retort the pieces of Ivory very black within and without, if the fire were to the last degree of heat. Those pieces of Ivory the Painters make their true Velvet black, which they can never do of Ivory burnt in the fire; where the pieces are neither truly nor equally black, but of a mixt colour. You may also quench those pieces of Ivory upon a Tyle, and put them and leave them in a Potters Oven, till they are calcin'd to a white colour, which is that which the Ancients call'd *Spode*, that being depriv'd of its volatile Salt and Oils, is of no more worth then Harts-horn calcin'd in an open fire. The reasons which I have given for the blackness of woods distill'd through a Cornute, and why they cannot be turn'd to Ashes, how violent soever or long continu'd the fire may be, while they are shut up and kept from the air, the same reasons, I say may be given for the blackness of Ivory; to which I refer the curious Reader, to spare the trouble of a repetition.

Harts blood may be also distill'd after the same manner as mans blood. The ribs also and other bones of a Whale after the same manner as Harts-horn. The volatile Salt and Oil approaching very near to those of the same parts of other Animals. Yet there are some Physicians who attribute to them a specifick vertue for the ease and cure of the Gout, giving the Salt inwardly, and outwardly applying the Oil upon the parts aggriev'd.

CHAP. VII.

Of the Preparation of Toads.

TOads that seem to be abhorr'd and abominated by all mankind, have yet their virtues, which are very considerable. I omit the command which some pretend that the Toad has over the Weasel, and the necessity which he imposes upon that creature to put himself whether he will or no into his mouth, which the Toad opens on purpose to stifle the other. I meddle not neither with the Philosophical discourses of some upon the cunning of that creature in fighting with the Spider; only I must say, that besides the good parts that Chymistry draws forth by distillation, the body of a Toad dry'd, is useful in the cure and ease of a good number of diseases.

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The drying of Toads is the first and most common preparation in use, as well for their Chymical distillation, as Galenical prescription. And to this purpose, having ty'd a packthread to their hinder leg, and hang'd them up in an airy place, leave them there not only till they dye of themselves, but till they are quite dry. Then if you intend to distill them Chymically, cut them in pieces, and put them into a Retort of Potters Earth or glass, well luted, and place it in a close Reverberating Furnace. Then having exactly luted a large Recipient to the beak, you shall draw forth with a gradual fire a volatile Salt with an Oil, together with much slegm, which will be all together in the Recipient; of which you must afterwards make a rectification in a Sand-bath with a moderate fire, in a Matras with a long neck cover'd with its head carefully luted, observing in all things the same method as for the rectification of the pure substances of the Viper. Whose vertues those of the Toad are very like to, as also the dose and uses. Nevertheless the volatile Salt of Toads is particularly recommended for the cure of the Hydropical, especially being mix'd with a little of that fix'd Salt, which may be drawn by ordinary ways from the sediment in the Cornute after distillation.

The whole body of the Toad dry'd, and held under the arm-pits, in the hand, or behind the ear, or hung about the neck, is accounted a specifick to stop bleeding at the nose. It stays the menstrums, or irregular losses of blood in women, being apply'd upon the Navel. The bone of the left leg before, which is call'd the Toads arm, held against the tooth, asswages the pain, according to *Van Helmont*, and the experience of some moderns. The powder of the whole Animal put upon Buboës, or pestilential Carbuncles, draws forth the malignity, as it does also in Venereal shankers. It fetches out the water from the Dropsical, being laid to the reins, and given in White-wine from a scruple to half a dram. *Helmont* recommends very highly Amulets compos'd of the powder of a dry'd Toad, and the stuff which he disgorges dying as he hangs, falling into a Cup of Wax set on purpose to receive it. Affirming that those Amulets are specificks as well to preserve from, as to cure the Pestilence.

Some Authors attribute all the vertues of a Toad to a Stone, or Bone, which is sometimes found in the head of those Animals, which are large and old, and is call'd a Toad-Stone.

CHAP. VIII.

Of the Preparation of Frogs.

Frogs not having any thing venomous in them, when they are cut to pieces, may be put into a glass Cucurbit, plac'd in *Balneo Maria*, and cover'd with its head; so with a soft heat you shall draw forth a water, accounted very proper to appease internal-pains, especially of the Reins, Ureters, and Bladder. After which distillation, put that which remains in the Cucurbit into an earthen Retort, well luted; and having plac'd it in a close Reverberating Furnace, and fitted a large Recipient to the beak, and exactly luted the jointures, make a distillation with a gradual fire, proceeding as in the distillation of Vipers, and you shall find a volatile Salt and Oil, mix'd with much slegm at the bottom of the Recipient; of this make a rectification according to the rules already given, and attribute to the Oil and volatile Salt, very near the same vertues as to that of Toads.

You may also burn the Frogs in a pot, and reduce them to Ashes, to stop the bleeding of wounds, by strewing it upon them; and bleeding at nose, by putting it into the nostrils. They are also mingl'd in medicines proper to make the hair grow. They are also giv'n inwardly from a scruple to a dram in proper liquor, to stop Gonorrhœa's, after the virulency is carry'd off.

Some Authors commend Toads eaten against the venom of Serpents. They apply them also alive upon pestilential sores to suck out the poison; they also attribute particular vertues to the heart, liver, gall, and fat, and some other parts of Frogs. But chiefly they esteem their Sperm, gather'd in *March* in the full of the Moon,

Moon, and distill'd in *Balneo Maria* between lukewarm and boiling, which water they give inwardly in vomitings, losses of blood, internal inflammations; and outwardly apply it to cure redness of the face, and kill the Itch occasion'd by sharp acid Salt humours. *Crollius* makes use of it also for his powder call'd *Sperniola*; the water of Frogs distill'd without fire is highly commended for preserving the complexion of Ladies:

CHAP. IX.

Of the Distillation of River-Crabs.

THE refreshing and moistning quality of River Crabs rendering them highly extoll'd for restoring those that are Physical and those that are dry'd and wasted with lingering agues, and long sickness we endeavour to preserve their natural moisture by distilling them. For that reason we do not study to separate their volatile Salt, though they are not unfurnish'd with it; as may be seen by distilling them through a Cornute in a close Reverberatory, proceeding in the same manner as for the distillation of other Animals or their parts, and rectifying the distill'd substances in a Sand-bath in a Matras with a long neck.

The most ordinary distillation of *Crevisses* is this; having first bruise'd them well and put them into a glass Cucurbit, cover'd it with its head and well luted the joints, place it in a Sand-bath over a gentle fire, and draw forth the water till the substances in the Cucurbit are almost dry; then letting the Bath cool and unluting the head, pour out the distill'd water upon the sediment, and luting up the Cucurbit renew the distillation as at first; reiterate afterward Cohobation of the distill'd water upon the matters five or six times, the better to open the solid parts of the *Crevisses*, to loosen them, and make the volatile parts ascend with the water.

After distillation perfected, calcine the Mark in an open fire, and having reduc'd it to ashes, make thereof a lye, and draw forth the Salt by ordinary means. After which having mingl'd this Salt with the distill'd water, it is not only proper for the restoring of Physical persons, but to open the passages of the Urine; insomuch that some affirm it to be able to break and dissolve the stone in the Kidneys and bladder. The dose is from one Spoonful to three or four, at a distance from times of meals; and the use of it may be continu'd as necessity requires.

They who only look after the Diuretick verrue of *Crevisses*, calcine them in the open fire, without distilling them, and having burnt them to ashes, make a lye, out of which they draw a Salt very proper for their purpose; though in no great quantity because of the dissipation of the volatile Salt by the open fire. This Salt is giv'n in a morning fasting from a scruple to half a dram in white-wine or some other diuretick liquor.

The stones improperly call'd Crabs eyes, which are found in the heads of large *Crevisses*, when the Sun is in Cancer, containing very much volatile Salt and some little fix'd, are not only diuretick but very proper to mortify the acids of the stomach. There is a volatile Salt and oil to be drawn from them, as from the parts of other Animals. Their tincture is also made use of drawn from them with white-wine, and giv'n with substances ground upon Porphyrie, from a scruple to a dram, either in broth or some other liquor.

CHAP. X.

Of the Distillation of Storks.

THat you may save all that Storks have good in them; after you have pull'd off their feathers, and taken out their entrails, cut them into small pieces, and put them into a glass Cucurbit plac'd in a Sand-bath, the Cucurbit being cover'd with a head luted with Amydon, and a small Recipient luted to the beak. Then distill the water with a moderate fire, till the matters in the Cucurbit are almost dry. Having put up this water apart, put all that was in the Cucurbit into a Retort of Potters Earth or glass, encompass'd with lute, and having plac'd the Cornute in a close Reverbaratory, fitted a large Recipient to the beak, and luted the jointures, make the distillation with a gradual fire, proceeding as in the distillation of other Animals, or of their parts. You shall have by that means a volatile Salt and Oil mix'd with the flegm, at the bottom of the Recipient, which you must rectifie in a Sand-bath in a Matras with a long neck, cover'd with a head carefully luted, as for the rectification of other volatile Salts and Oils.

The volatile Salt of Storks is highly applauded against all sorts of poisons and Epidemick distempers. It is also accounted a specifick remedy against the Epilepsie. It is given fasting in its own proper water from eight or ten to twenty or thirty grains, and the use of it may be continu'd as occasion requires. The distill'd Oil is also made use of for the same distempers, from two or three to nine or ten drops, incorporated with fine powder'd Sugar in their own water, or some other Cephalick liquor. At the same time you may also anoint the Nostrils and Temples with this Oil, and apply it outwardly to anoint paralytick members, and the pained parts of the Nerves and Joints; to which purpose they sometimes make use of the melted fat of these birds. The powder of the inward part of the stomach of the Stork, is highly extoll'd against all sorts of poisons, given in some Cordial liquor from one scruple to a dram. With the same success you may take dry'd dung of these Birds, to which purpose the Salt and volatile Oil of the same dung is much more prevalent. But it must be in *Holland, Switzerland*, or some other Countries where these Birds build at the top of the Chimneys, where you may have enough of their dung to distill.

Some of the Ancients burn'd these Birds, as also Swallows for their Ashes sake, believing to find therein all the vertues of those Creatures in a short compass. But dissipation of the volatile Salt and Oil must divert Artists from those destructive ways.

CHAP. XI.

Of the Preparation of Bees and their Honey.

FROM Bees may be drawn through a Retort almost the same substances as from other Animals. But the little use of these substances separated is the reason that we only burn those little Animals to cinders to mix them with Pomatums, of which the fat of Leaves, and oyl of small Nuts is generally the foundation: the use whereof, is to anoint those parts where they intend the hair should grow, which is almost the only use made of these little Animals. Though some there are that never burn them, but only reducing them to powder, make the same use of it, as of the Ashes.

All the World consents, that Honey is the choice and collection which the Bees make of the most pure, most delectable and most odioriferous parts of Plants; particularly, of their Flowers and Fruits: and that Wax is a Body compos'd of the more

more gross, more solid, and more tenacious matter which is mix'd among the substances from whence they draw their Honey. The Honey which they gather from the sides of Mountains in hot Countries that lye to the East, and there is more care to be taken of the place from whence you have it, then to trouble your self to purifie it for its distillation; the best way being only to hang the Combs in a bag of transparent Cloath, in a place that is close and naturally hot, and to let the honey drop of it self, by which means you neither take away its whiteness nor its other good qualities either by fire or other ways.

Some, when they go about to distil Honey make use of Gravel or Flint-stones, or some such Matter: But beside that, I know by experience, that those things putrifie, in some sort with the Honey, and break the Cucurbit; it is much better to let it alone. For example, put two pound of Honey into a Cucurbit of Copper well tinn'd within and very high, and having plac'd it upon a little Furnace, cover'd with its head, Lute the jointures; and fit a small Recipient to the Beak: Then kindle under it a Fire so small, that may not cause the Honey to boyl, yet may keep it a little more then luke-warm. By that means the clear and Odoriferous water of Honey will ascend, attended by the Spirit, which you shall know by its Acid tast, and by its colour enclining to yellow, which will grow deeper and deeper, especially, if you insensibly increase the Fire; whereby at length the Oylie part of the Honey will ascend which is the last part you are to expect in Distillation. You may keep a part the clear and Odoriferous Water that ascends first, separate the Oyl from the Spirit, by the means of a sheet of Cap-paper moistened, put into a Glass Funnel, and rectifie the Spirit, by consuming the watery part which is mix'd with it, in an Evaporating Bath.

The water of Honey is opening and Diuretick, especially when enliv'n'd with its Spirit. The one and the other mix'd together are good to make hair grow, as also to heal several Diseases of the Eyes, especially, Suffusions, or Pinns and Webbs. It is used also to take out spots from the Face; and the Spirit well rectified alone serves to dissolve Iron, or Mars, Saturn or Lead, and some other Metals. The little Oyl that is to be drawn out of Honey, is the reason that we seldom continue the Distillation to the height for that purpose. As we as seldom burn the remains in the Cucurbit to draw forth the Salt, in regard it is but little and the virtues not extraordinary.

Some Writers prescribe certain ways to draw Vinegars out of Honey; But I find no way more rational, but to let the Hydromel fermented sowre of it self, as I have shew'd in the Galenical Preparations, which will happen in a small time, provided you leave the hole of the Tunnel that contains the Hydromel open.

CHAP. XII.

Of the Distillation of Wax.

TAKE two pound of pure yellow Wax, of a fragrant smell, and such as was separated by fire from its faces, cut it into little pieces, and having melted it in an Iron or Copper skillet, over a very gentle fire, incorporate with them as much ashes of good new wood as their substance will receive; then having put this mixture into a large glass Retort, place it in a Sand-bath in a Capsula or Kettle proportionable, so that the Cornute may be quite encompass'd and cover'd with Sand, except the neck. Then putting a small covering over the Capsula or Case of the Retort, and fitted and exactly luted a half Balloon to the neck of the Receiver, make your distillation with a gradual fire, soft at first, and violent at length; letting it so continue till no more come forth of the Retort. Then giving the Sand time to cool and unluting the Receiver you shall find a thick'n'd oil like Butter, the Flegm the Spirit and some little volatile Salt, and after you have stirr'd the substances in the Receiver, to dissolve the volatile Salt in the liquors, pour them out by inclination into a Bottle, and having melted the thick oil over a very gentle fire, pour it out
into

into a glass or gally pot to keep it for use; or else empty it into a skillet, and having melted it over a very soft fire, incorporate with it the powder of Quicklime newly powder'd of it self, as much as the substance will contain; then put all this into the Retort being made clean, and setting in the Sand-bath and distilling it as before, you shall have an oil of Wax very clear, with some almost as white as water, mix'd with some little Spirit of Flegm, which you may separate with a glass Funnel or otherwise.

The volatile Salt of Wax may be rectify'd in a Bolthead or Matraass with a long neck in a Sand-bath, as well as other volatile Salts when you distil a considerable quantity of Wax. The dose of which is from eight or ten, to fifteen or twenty grains, in white wine or some other liquor, as being a good Diuretick and Diaphoretick. The curdled or thick'nd oil is good to lay upon clefts and chops of the breasts, hands, feet, and fundament. It is also good for Childblanes, and to dissolve hard and skirrous swellings. In all which cases you may use the clear oil, which is besides very Diuretick, the dose being from three or four to nine or ten drops, incorporated with fine Sugar, and steep'd in white-wine, or in some other liquor.

The Spirit has the same vertues, but operates with less efficacy.

CHAP. XIII.

Of the Distillation of Cheslops and Earth-worms.

I Put the distillation of *Cheslops* and *Earth-worms* together, as well because there is the same way of proceeding to be observ'd, as also for that their vertues are very near the same. These little Animals contemptible in appearance, abound no less, considering the proportion of their bodies, in volatile Salt and Oil, then the most part of other Creatures, though they are very full of moisture. You must put them into a Retort, and place that in a close Reverberatory, with a large Receiver carefully fitted and luted to the neck, and so with a gradual fire draw forth the volatile Salt and Oil, mix'd with very much Flegm, of which Rectification must be afterwards made in a Sand-bath, with a moderate fire in a Bolthead with a long neck cover'd with its head perfectly well luted; which you have taken off, and put up the volatile Salts which will first ascend; continue Rectification, and separate and put up the Oil also, and the rest of the volatile Salt dissolv'd in some portion of the Flegm and distill them afterwards into a small Receiver fitted and luted to the neck of the head.

Some persevering in the mistake of the Antients, burn to ashes these worms and *Cheslops*, as well to keep them so for use, as to extract a Salt out of the ashes; not foreseeing the dissipation which the fire makes of the volatile Salt of these Animals, of which there remains none behind, but what the acid of the combustible matters has fix'd. Some there are also that having distill'd *Cheslops* and *Earth-worms*, in a Cornute, dissolv'd the volatile Salt in the watry part, and separated that liquor from the oily with a wet sheet of Cap-paper in a glass Funnel, pour drop by drop into it Spirit of Salt or Vitriol till the effervescency cease; whence it comes to pass, that not only the volatile Salt is united to the acid, but also their being corporifi'd and chang'd into fix'd Salt, whereby the volatile as Diaphoretick as it was, becomes only Diuretick.

This change cannot surprize those who know the great disposition which the volatile Salts have to unite to acids, and the common change of nature that will happen to them for a time by that union. Nor do they wonder more, that when you add to this Salt thus fix'd, the double of its weight of fix'd Salt drawn from Tartar well calcin'd, the acid should quit the volatile to unite its self to the fix'd Salt, and restoring the volatile to its former liberty, should permit it to sublime as it does to the top of the head, when you give it a proportionable heat.

The volatile Salts of *Cheslops* and *Earth-worms* are equally Diaphoretick, and very proper to purify the mass of blood, and to expell its impurities by transpiration. They powerfully mortify acids, and are therefore recommended for the cure of
Ulcers

Ulcers, Cancers and the Scurvy : to ease the pains of Gouts, Rhumatismes, and all pains that torment the Muscles and Nerves. The doses and manner of taking these Salts, are much like those of the Salts of other Animals ; as also their oil, the virtues whereof tend very near to the same end.

Some there are that leaving the Earth-worms and Cheslops for two or three days to empty themselves between two earthen pans, wash them with white-wine, and having dry'd them in an oven, the great heat whereof is over, pulverize them very finely, and give the powder from a scruple to a dram in white-wine, or in some other liquor, against stoppages of Urine, as also to cure those other diseases for which their volatile Salt is recommended.

The worms that breed in the stomachs and entrails of men may be distill'd in the same manner, and volatile Salts and Oils drawn from them, not much inferior in the same virtues, and which you may make use of instead of Earth-worms.

CHAP. XIV.

Of the Distillation of Cantharides.

NO question but Cantharides are in their whole substance very sharp and corrosive ; for being bruise'd and apply'd to any part of the body, they raise blisters, and ulcers too, if they lie long. And being tak'n inwardly, they make a strange haec, causing inflammations of the inward parts, especially in the Rains, Bladder, and Vessels adjoining to them, which sometimes cease not without pissing of blood. Yet this malignity is no hindrance but that they are often prescrib'd outwardly, observing necessary cautions ; and but that by Distillation they produce volatile Salts and Oil, that produce greater effects in smaller quantities than any other volatiles that are prepar'd.

Take dry Cantharides without cutting off either their heads, their wings, or their feet, and fill up about three quarters of a glass or Earthen Retort luted round ; then place it in a close Reverberatory, and having exactly fitted and luted a large Recipient to the neck, make a distillation with a gradual fire, as for other Animals or their parts ; and you shall find in the Receiver a volatile Salt and Oil, accompany'd with much flegm, which you must empty into a Matraass, with a long neck, and having plac'd it in a Sand-bath cover'd with its own head carefully luted, with a small Recipient fitted and luted in the same manner to the neck, make a Rectification of the substances with a moderate fire, which will presently cause the volatile white and Crystalline Salt ascend, which you must stop up with as much speed as care, in a bottle of glass perfectly well stopp'd, putting on another head in the place of that tak'n off ; the Commisures of which having carefully luted, continue the fire and draw forth into a small Recipient, the Oil and the rest of the volatile Salt dissolv'd in some little Flegm, which it has carry'd away with it. Which done, separate the Oil from the Liquor, and keep each apart in double glass bottles well stopp'd.

The volatile Salt of Cantharides is one of the most powerful Diuretics that are to be met with, so that it is affirm'd to be able to break, and dissolve the stone in the Kidneys and Bladder. It is so penetrating and so sharp, that it raises little blisters upon the tongues of those that taste it. So that it is not to be tak'n but temper'd in Liquors, or perfectly well mix'd in Opiates, or other soft medicines from one or two grains, to five or six at most. The effects are much more advantageous and with much less hazard, than those of Cantharides giv'n in the simple substance, to raise the vigour of either sex to amorous performance. For which purpose the Oil is very proper, mingl'd with equal parts of distill'd oil of Cloves, and twelve times as much press'd oil of Nutmegs, to anoint the soles of the feet, the Testicles, and the Perineum, provided their strong smell can be endur'd. The liquor containing the rest of the volatile Salt may be made use of for the same uses as the Salt it self, proportioning the dose, according to the greater or less quantity of Flegm that it contains.

CHAP. XV.

Of the Distillation of Emmets.

Put into a Matrafs proportionable as many Emmets as you can catch in Harvest time, and pouring upon them Spirit of Wine well rectifi'd three fingers above the Emmets, stop the Matrafs exactly well, and set it over a Bakers Oven till the Emmets be quite chang'd into liquor. At which time having unstopp'd the Matrafs, and pour'd out the liquor into a glass Cucurbit, cover it with its head, and lute the Commissures exactly; and having plac'd it in a Sand-bath, and fitted and luted a small Recipient to the neck, make distillation with a very moderate fire, till there remain behind but very little liquor in the Cucurbit. Then having cool'd and unluted the Vessels, pour out and keep the spiritous water distill'd, and full of the volatile Salt of Emmets into a double Viol well stopp'd to keep for use.

This spiritous water is very much recommended to revive and strengthen the natural heat, to provoke lust, for which purpose they add to it certain Aromaticks, as Cinnamon, Cloves, Mace, &c. It is also very good to restore persons that are wasted with Atrophies. It is given from half a spoonful to a whole spoonful, alone or mix'd with a little Wine, or with a third or fourth part of Cinnamon-water.

Emmets may be also put into a Matrafs, which being well stopp'd, and lapp'd about with dough about a fingers breadth, is to be put and kept in a Bakers Oven all the while the great Loaves are baking; after that the liquor is to be strain'd out and kept in a double Viol well stopp'd, as a most special remedy against deafness.

They are also to be infus'd and boil'd afterwards over a gentle fire in Sallet-Oil, then strain'd and kept to anoint the parts of nature, to advance Giture. There may also a volatile Salt and Oil of Emmets be drawn, by distilling them in a Retort, like the Cantharides, which are almost for the same purposes.

CHAP. XVI.

Of the Preparation of the Peacock.

THE Peacock which is accounted one of the most beautiful birds, and one of those that live longest, has not for nothing gain'd the Title of a Medicinal Bird, in regard that not only his body contains several remedies proper for Physick; but because his flesh will keep longer than that of any other Animal. Peacocks broth is accounted a particular Remedy for the Plurisy. However this is certain, that from the whole body of the Peacock, from his Excrements, and especially his dung, many specifick Remedies against the Epilepsy are to be drawn, not to speak of those other vertues attributed to other parts of the body.

Pick the Peacock well, and draw him, then cut him to pieces, and put him into a Cucurbit of Glass plac'd in a Sand-bath; cover the Cucurbit with its head, and having luted the closures with Amydon, and fitted a small Recipient to the neck, you shall draw forth a water, very fit to fortify the brain, and preserve it against such diseases as it is subject to. This Distillation being at an end, take that which remains out of the Cucurbit, and put it into an earthen Retort luted all over; set the Retort in a Reverberatory, and having exactly fitted and luted to the beak a large Receiver, you shall with a graduated fire, draw forth a volatile Salt and an Oil together with much Flegm, which must be rectify'd in a Matrafs like the former. The Rectification will yeild a white Crystalline volatile Salt, and a clear oil of great vertue, especially against the Epilepsy, in the same dose and after the same manner as other volatile Salts of the same nature; and making use of the Oil to anoint the Temples, sutures of the skull, and to put up into the Nostrills.

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As for Peacocks dung, after you have well dry'd and bruise'd it, put it into an Earthen Retort, luted all over, and place it in a close Reverberatory; then having fitted and luted a large Recipient to the neck, you shall draw forth substances very like to those which the Peacock it self yeilds in Distillation, which must be also rectify'd in a long Matraass, to be us'd for the cure of the Epilepsy. The volatile Salt and oil of Peacock and his dung is also very proper to cure vertigoes, and to suppress the vapours which cause it.

It is believ'd that the dry dung of the Peacock, to the weight of a dram being infus'd in white-wine, then strain'd and giv'n to drink every morning fasting from the new to the full of the Moon, is a specifick remedy against the Epilepsy and Verticles. The fat of this fowl is also recommended against Colicks, and the feavers burnt, suppress the vapours that rise in the Matrix.

CHAP. XVII.

Of the Preparation of Castor.

YOU may through a Cornute distill all the parts of the Castor, as we do those of other Animals, and rectify all the substances drawn from them in a Matraass with a long neck. But the conveniency of Salts drawn from other Animals and there nearness in vertue to those which might be drawn from this Animal, make us forbear any such preparation. So much the more because the transcending qualities which are known on all hands attributed to the substances contain'd in the vesicles of that Creature, which for their excellency are call'd particularly *Castoreum*, cause us to neglect the other parts. These qualities, together with the dearness of the cuds or pouches, together with the nature of the substances enclos'd therein, is the reason that we never expose them to a fire of Reverberation, to separate the volatile Salt and Oil which might be drawn forth by a Retort. And therefore having taken off the unctuous part that lies in the bladder by it self at the top of the bags, and set it by, we bruise or cut very small the fleshy substance, and putting it into a Matraass proportionable, pour upon it Spirit of wine well rectify'd, till it swim four fingers above the substances; the having perfectly stopp'd the Matraass, we place it up on a Bakers oven, leaving it there to digest for fifteen days or three weeks, or longer if you please, stirring the Ingredient from time to time, the more effectually to impregnate the Spirit of Wine with their most Essential parts, which will be at length something of a high colour. Then having strain'd and squeez'd the substances, we keep this Liquor in a double glass bottle, under the name of *Tincture of Castor*: but if you desire a Distillation, pour out all the matters contain'd in the Matraass into a glass Cucurbit, and having plac'd it in a Sand-bath, and cover'd it with its head carefully luted, and also fitted a small Recipient luted as exactly, draw forth the Spirit with a moderate fire, till you have driv'n all the Spiritous part to ascend. By which means you shall have that which they call the Spirit of Castor, which you will find to have rais'd along with it in its Distillation, the most pure and most volatile substance of that part of the Animal, which else had remain'd in the Tincture. The vertues Doses and manner of taking are much alike, in regard they are of greater prevalency in all cold diseases of the brain and stomach, but particularly against those of the Matrix. The dose is from half a dram to two, and sometimes and upon certain occasions to half an ounce mixing them in Cephalick, Hysterick or Stomack waters. Sometimes they are put up the Nostrils, or us'd to anoint the Temples and Wrists.

As to what remains in the Cucurbit, having filter'd it, and put it into an Earthen Pipkin well glaz'd within, and the Pipkin upon a very soft fire, evaporate by degrees the superfluous moisture to the ordinary consistence of Extracts, then letting it cool, put it up in a Gally-pot close stopp'd, and keep it for your use. This Extract containing in it all the pureless volatile parts of the Castor, deserves to be sav'd, to be dissolv'd in Spirit of Castor, or in Cephalick or Historick Liquors, or to be tak'n in Bolus, from half a scruple to half a dram, for the same diseases for which the Tincture and Spirit are prescrib'd.

As for the Uncturus part which is found in a Bladder by it self, at the upper end of the Bags or Cods, Chymistry takes no notice of it in preparation. But it may be by the Galenick Pharmacy properly used to make oil of Castor, as I have said in its due place.

I could have fill'd this Book with several other Chymical preparations of Animals, or their parts, but I believe I have produced enough to satisfy those who apply themselves to Chymistry, and to enable them to undertake and to accomplish with success all those preparations of Animals. And therefore I proceed to Minerals.

The



The Third Book :

Containing the

CHYMICAL PREPARATIONS

OF

MINERALS.

CHAP. I.

Of the Preparation of Earths and Bolus's.

I began the first Book of this Third Part with the Chymical Preparation of Plants. For finding them upon the surface of the Earth which produces them, they present themselves first to my Eyes. Immediately after I treated of the Preparation of Animals, for whose sake the Earth produces those Plants. It behooves me now to shew you the way how to prepare the Earth it self: that it may afterwards proceed to the preparation of those mixt Bodies which it encloses within its Bowels, and of those other Substances that depend upon them; and which may be plac'd in the Number of Minerals. I do not here undertake to speak of that Natural Chymistry which is continually practis'd in the Earth, to bring forth those Productions which we see, and which lye concealed from us; but only of such Chymical Operations as may with advantage be made upon the Substance it self, and the mixt Bodies that belong to it, of the most part whereof the Earth is esteem'd to be the Mother and the Nurse.

There is a fix'd Salt to be drawn from an untill'd Earth, naturally barren, observing this Method; Having digg'd a hole about two foot deep, and taken out some bushels of the bottom Earth, put the Earth into a convenient tub, and having soak'd and stir'd it in three times as much Rain-water as there are measures of Earth, leave the Earth to settle for two or three days; then having pour'd out the water by inclination, and strain'd it through course Paper, evaporate the superfluous moisture in a Caldron, or an iron kettle over a moderate fire, and you will find the Salt of Earth at the bottom of the Vessel. You may make this Salt white and crystalline, by putting it into a Crucible, and exposing it to a violent fire for a good hour, stirring it from time to time with an iron Spatula; then having dissolv'd it in Rain-water, and filter'd that water, you may coagulate it again.

The qualities of this Salt are very like to those of Sea-Salt, so that you may also draw from it a Spirit almost of the same nature.

In regard the Lotions of Earth, and their preparation upon Porphyry, are the same with those of Galerice Pharmacy, I will only say by the by, that over much Lotion carries away what the Earths have of Salt and Spiritous; and that Lotions not being made use of but to separate their Sandy parts, or their other impurities, you may without altering the vertues of those Earths, do as well by beating them in a Mortar, and sifting them thorough a silk Seirce, which the Sand nor other impurities cannot pass thorough; you may moist'n clay Moulds with Cordial waters or Decoctions; or the Bolles that you grind upon Porphyry, or knead them into little Loaves, provided you do not wet them too much.

From Clay Earths dry'd especially those of Lemnos, you may extract a Flegm and Spirit, somewhat tartish, commended to provoke sweat, distilling it thorough a Retort in a close Reverberatory. You may also prepare Magisteries of this Earth, dissolving them in Spirit of Salt, or Niter, and precipitating them with Salt of Tartar dissolv'd into Liquor, which uniting it self to those acid Spirits, causes them to abandon the body which they had dissolv'd; or else by pouring fair water upon them, which weakening those Spirits, produces the same effect. But the violent operation of those Spirits upon the Earth, being as little advantageous, as the dissipation of its Salt and Spiritous parts, which happens by the conjunction of the same Spirits, and by the Lotions which must be us'd to carry off their Acrimony, I am certain that these Clay Earths being taken out of their own place, and sifted thorough a silk sieve, are incomparably much better. For they retain their particular quality to dry up and close, to resist the putrefaction of humours, poison, and the malignity of Feavers, to dissolve curdl'd blood and provoke sweat. They are also of great force against Dysenteries and Diarrheas.

CHAP. II.

Of the Preparation of Waters.

I do not undertake here to speak of the use of water, no more then of the necessity of its union with the Earth, for the generation and production of mixt bodies. But because it is usually plac'd among the number of Minerals, it behoves me to speak of its principal preparations. Both the one and the other Pharmacy make use of Fountain and River water for several uses, with any preparation of them at all; in some places they are forc'd to make use of well and standing water instead of others. But Chymistry observes something more excellent in Rain water, more especially at the time of the Equinoxes and chiefly the vernal. All Rain water is generally more sweet, more thin, more light then any other water, because the Sun has rais'd it, and compos'd it of the most subtle vapours of the water, and that it has had time to purify it self, and to subtilize it self by passing thorough the air before it fall upon the ground. The Spring is also the time wherein the air most fill'd with universal Spirit, the effects whereof are so potent for the production of all things, and that it abounds most in invisible volatile Salt, which animates all sub-lunary substances.

Yet the purity of Rain water is not such neither, but that you may let it settle for two or three days, and that you must filter it, before you make use of it, and distill it in *Balneo Maria*, or evaporating Baths, when you intend to augment its subtility and penetration. To which purpose it is enough with a moderate fire, to draw off but half of the moisture; then having emptied and kept apart the residue, and pour'd in more Rain water, continue this Distillation till you have enough water subtiliz'd and charg'd with the most volatile Salt of Rain water; after which having put all the Residencies together, or in several glass Cucurbits, in the same Bath, evaporate the moisture, till only the fix'd Salt of the Rain water remain at the bottom dry'd and mix'd with some Terrestricity.

Some to have a more Spiritous water, shut up the rain water in a Matrafs, and having seal'd it Hermetically, set it to digest or putrify for thirty or forty days, the better to precipitate the feces, and to make the Spiritous part more fit to forsake the watry, and to ascend first in Distillation.

Snw

Snow being only rain congeal'd in the Air by the cold, and the volatile Salt part being by that means stopp'd, you may after the same manner draw forth a water, not only like in colour, flavour, and vertues, like that of Rain water; but also more penetrating, because that Snow abounds more in Salt. And that's the reason there is more Salt found after the Evaporation of Snow than Rain water.

The distill'd waters of Rain or Snow, are very proper to penetrate the substances of several mix'd bodies, especially those of Vegetalls, and to draw forth their Tincture; which they will do more effectually if you add to them their fix'd Salt. It is said also that the Spirit which may be drawn from this fix'd Salt, is good to dissolve Metalls, especially Gold.

The nature of dew very much resembles that of Rain water, or Snow, but it is more subject to dissipation. For proceeding only from the Exhalations of the earth, and not ascending so high as the vapours that cause Rain, it is in less quantity, and remains not long. For being only in the middle of the Spring, when the Sun approaching toward the Solstice, the air is clear and serene, and not at other seasons, or when the air is cover'd with Clouds, which hinder the Rayes of the Sun from drawing up the Exhalations of the Earth, or turn to Rain; and not falling neither in windy weather; you must be very diligent to gather it when it falls, or which is better, to receive it into Basons and other Vessels as fast as it falls, and put it up at the same time into bottles well stopp'd, to make use of it in that condition, or to draw from it a Spirit, having digested it for forty days in a Matrafs with a long neck hermetically seal'd, and observing the same method as for Rain water, though you must not think to find the same fix'd Salt at the bottom of the vessel as Rain water would have yeilded, the extream volatile of the Spirit of dew, causing it to ascend in Distillation.

It is a custom with some to evaporate over the fire the Sea water, and the water of the brackish fountains in the French Country, and in other places that they may get the Salt, which remains after Evaporation; but they never use to distill it for the waters sake, but only upon the Sea, when they want fresh water: though that which they do draw from thence be accompany'd with a kind of Acrimony, because of the volatile particles of the same Salt which rise in Distillation.

I shall not speak here of the Distillation of Mineral waters, because it is not necessary for their use, and for that we never spend them but in their natural condition. Nor shall I speak of the method to be observ'd for the discovery of the several substances which impart their principal vertues to Mineral waters, for which the curious may find all necessary instruction, in a book of *Observations upon the Mineral Waters of France*, written by *Monsieur Du Clos*, Physitian in ordinary to the King, publish'd in the year 1675. after a great number of experiences by him made upon that subject. Nor is it necessary to speak of the artificial waters that may be made by dissolving in Rain, River, or Fountain water diverse Salts and other Spirits, accomodating them to the malidies and temmperature of the Patients, the just and certain Composition whereof renders the use of them much more advantageous, then that of Mineral waters, which are made use of like one Saddle for all Horses. It being impossible to know the precise quantity of particles which they have taken along with them of the several Mineralls which they have met with in the Entrails of the earth: though by their smell, colour, and other distinctions which may be made, some considerable knowledg may be had of Mineralls which communicated their principal qualities to them, and that some judgment may be given from the advantages, which a good number of persons have found by them in diseases of the same nature which you desire to cure.

CHAP. III.

Of the Preparation of Stones, and pretious Stones in general.

I Will not examine the reasons upon which some men have grounded the solidness and hardness of stones, or precious stones, or the cause of their lapidification. For their attributing the cause thereof to the proportionate union of the Alkali's with the Earth, or of both of them with Acids, or with water or juices that have a ferment in them, or a petrifying seed, is of little moment. Though we find wood, bones, and other substances to petrifie in some waters, and stones that are hid in the bodies of certain Animals, as also of men, besides that the Birth has been petrified in the wombs of some women. Nor does it signifie much that they have attributed another cause to the Acid of the air, of which we see apparent effects in Earths, which lying upon the superficies of Plains and Mountains, petrifie in succession of time. Or that they would add thereto the natural disposition which some stones have to resume their shape of stone, after they have lost it, like Plaister; or to communicate that inclination to substances mix'd with them, as Lime does. My chief intention is here to treat of the principal intentions that Chymistry practises upon stones, and precious stones.

The Mechanick imitating Chymistry, calcines in proper Furnaces, with a violent and long continu'd fire, several common stones, as certain River Flints, and certain stones whereof they make Lime for building, and those whereof they make Plaister. Chymistry sometimes calcines certain precious stones, keeping them some hours in fusion over a violent fire, as is often practis'd upon crystal; sometimes she mixes with them Niter, Salt of Tartar, or some other Salt, when she would calcine them to draw the liquor from them, as to have the liquor of Crystal. Sometimes she only heats them two or three times red hot in the fire, and quench them as often in Water, as is practis'd upon *Lapis Lazuli*; sometimes she dissolves them in corrosive liquors, as the Saphir in that of Vitriol, and some other precious stones in distill'd Vinegar, and which is that which they call *Solution*, or *potential Calcination*, which is attended by other operations, of which in due place. She also makes Magisteries of these Stones, though to little purpose, in regard their vertue is much inferior to the stones from whence they are extracted.

CHAP. IV.

Of the Preparation of Lime.

ALL the world knows, that the Stones whereof Lime is made, cannot produce those effects which are remarkable in them; without having pass'd the fire, and being reduc'd into that condition by calcination. 'Tis known also, that the violent operation of the fire consumes all their moisture, and that they have not acquir'd the vertue of binding in one mass, and petrifying together Sand and other substances, till after they have been calcin'd and soak'd in water. We must also confess, that the Lime is not free from the impressions of the fire which it has undergone. Yet we have no reason to conclude from thence, that its caustick quality proceeds from little fiery bodies, which they would have to be enclosed within it. For if that were true, Tyles and Bricks, which suffer as much violence of fire, would not be without those little igneous or fiery bodies. Those stones which are not of the same nature as those of which they make Lime, would have the same caustick quality, have endur'd the same fire as the Lime-stones, and sometimes a much

much longer time, Iron, Copper, silver, Gold, and several other substances would be also Caustick, after they have endur'd the fire as long, and renew'd it as often. But since there is no such thing, and that they are not able to burn, but when they come just out of the fire, we must search in the proper substance of the Lime, and no where else for its Caustick quality, and particularly its half Spiritous Salt, the subtilty and penetration wherof manifests it self very apparently, though it cannot be separated from its Terrestrial part to reduce it into a Mass; like other Salts.

'Tis then the dryness of this Salt, and the Terrestrial part, and their great inclination to join with the water which has its natural acid with it, which is the sole cause of their heat and effervescency when they join together, which makes them act reciprocally one upon another. Whence proceeds the particular quality which the Lime has, to bind and petrify all bodies that are mix'd with it, so that we are not to impute that action, no more then the Caustick quality to the little bodies of fire, the necessity whereof is so much the less maintainable, because we see by experience that Quicklime is not heated at all, by pouring upon it the Spirit of wine, or oil; though both the one and the other are very combustible, but that on the contrary they put out the heat which happens to Lime by its conjunction with the water. As to the Caustick effects of Lime, they are to be attributed to the Solidity, and incroaching resemblance of the parts of its own proper Salt, which are little different from those of the fire, to which they pretend to attribute those effects.

The most simple preparation of Quicklime is that of its Elixivation, not that we can separate the Salt from it, as from other Lyes. But we dissolve in water the Spiritous desiccative Salt, which it is also burning when is concentr'd with any Analogous substance. To which purpose having put two or three pound of good Quicklime into a grat Peuter Basôn, pour upon it by little and little, Rain or River-water, as much as suffices to open the Lime, and dispose it to dissolution. Then pour on more at several times, till the water be about five or six fingers above the Lime, stirring the substances often with a wooden Spatula, to the end the Spiritous Salt part of the Chalk may be well dissolv'd in the water. After this letting the whole settle for some hours, pour out by Inclination and filter the clear water; which must be kept in double bottles well stopp'd for use. For this is call'd Lime-water. Then you may pour upon the same Lime as much more fresh water, as at the first time; and stir it, after that giving it leave to settle, filter it also and keep it apart. Repeat the same operation the third time, to take away utterly from the Lime all its Salt part. Having so done, you may if you please dry the settlement of the Lime, and keep it as an extraordinary good and gentle Dryer. It is easy to judg which of these waters is most effectual; and therefore they are to be kept both apart, the one for lesser, the other for greater causes, as well against Gangrenes, as maladies of the Eyes, and the most part of Ulcers.

There is also another water made of Lime which the Moderns *Phagedenick*, or the Canker-water, which is nothing but a mixture of three pints of the first water with three pints of good Spirit of wine, and half an ounce of good sublimate corrosive. But this proportion is not so regular but that you may augment or abate of the dose of either; especially of the sublimate. Some also add as much Arsenick in Powder as sublimate, as also some drops of Spirit of Vitriol. This water is highly esteem'd for stopping that Gangrene and its accidents, and for the cure of malignant and corroding Ulcers: to which purpose the bottle must be always well shak'd to thicken the water: though it must not be done when apply'd to the eyes: for then the water must be clear and temper'd with Ophthalmick Waters. It is also made use of for the cure of Erysipela's, red swellings call'd *Flegmons*, burns; and all sorts of inflammations, tempering it with convenient waters.

You may make an Ophthalmic water with half a pint of the first water, one pint of the second, and a pint and a half the third, and three drams of Salt Ammoniack, putting all together into a Copper vessel, and there leaving it, till the liquor have acquir'd a blew colour; then having filter'd this water thorough a sheet of paper, keep it in a bottle well stopp'd for your occasions. The particles of Copper dissolved in this water, and mix'd with the Sal Ammoniack produce a good effect, and make an excellent water for diseases of the eyes.

Schroder highly extolls the Spirit of Quicklime, to break and dissolve the stone in the kidneys and bladder, giving it in whitewine, or broth, from two drops to five or
fix

fix. And for its preparation he prescribes, that having ground the Quicklime upon a Porphyry, you should imbibe it with the Spirit of good wine, distilling it, and cohobating or sprinkling eight or ten times in an Alembick of Glass exactly luted, and set it in a *Balneum Maria*, or an evaporating Bath; and that having mix'd ten ounces of this Lime dry'd with an ounce of Salt of Tartar, and eleven ounces of the *Caput Mortuum* of the same Salt well dry'd, you should put this mixture into a large Retort luted all over, and distill it with a gradual fire in a close Reverberatory, having fitted to the neck of the Retort a large Receiver, having a little Spirit of wine in the bottom, and a little Pipe underneath the part where the neck of the Retort ends, with a little Recipient to it. So that the Flegm being distill'd into the small one, by encreasing by degrees the heat of the fire, the Spirit may follow, and entering in vapours into the great Recipient, may there dissolve and mix it self with the Spirit of Wine. And then having at length lighted and burnt the latter, you may find at the bottom the Spirit of Lime, proper for the uses above mention'd.

Others, to put themselves to less trouble and care, having finely ground the Quicklime, and sprinkl'd it with as much good Spirit of Wine well rectify'd, as it can well suck up, fill therewith about the third part of a large Retort well luted about, and having set it in a close Reverberatory, and fitted and carefully luted a large Recipient to the neck of it, make the distillation with a gradual fire, and after they have drawn forth the Spirit of Lime with the Spirit of Wine, and fir'd and consum'd the latter in some Vessel, find at the bottom that of the Lime, which they keep in a double glass Bottle close stopp'd.

The Caustick quality of the Lime agrees very well with that of the corrosive Salts, when you intend to make Caustick stones. For the preparation of which, having finely powder'd a pound of Quicklime, and having mix'd it with two pound of Salt of Tartar newly prepar'd and powder'd, calcine them together for two or three hours, in a large Crucible over an open fire; afterwards make a Lye thereof, which having filter'd and evaporated, till the Salt remain dry at the bottom of the Vessel, put the same Salt in a *German* Crucible over a violent fire, till it come to run, at which time pour it into a Skillet of smooth Copper, heated before, where you may cut it while it is hot, into little pieces, fit for Cauterries, putting them up as speedily as you can into double glass Bottles, exactly well stopp'd.

You may also prepare stones for Cauterries, with the strong Lye whereof black Soap is made, which is compos'd of Quicklime and corrosive Salts. You may also prepare them with equal parts of Quicklime and Ashes made of Wine-Lees burnt, macerated together in water for some days, then filter'd and boill'd into Cauterizing stones. You may also prepare them by making Lyes of the Ashes of Ash, Oak, Vine-twigs, or Bean-shells, mix'd with Quicklime, filtrng them, and coagulating them into stones, as I have already said.

CHAP. V.

Of the Preparation of the Stone of Judea, and that of Linx.

THE great number of Remedies every day prepar'd to open the passages of the Reins and Ureters, and other conveyances for the Urine, is the reason that the stone of *Judea* nor that of *Linx* are so frequently prepar'd. Of which the former call'd also the Stone of Phœnicia, and Syria is of a white Ashy colour, of a tender and crumbling substance, of the bigness and shape of an Olive, but sometimes a little longer, and upon the outside equal and proportionable streaks quite through the length. The latter call'd also Belemnites, because its Pyramidical figure in some sort resembles an Arrow, is equally as brittle, but not of the same colour, and without streaks. However I thought good to shew you their preparation

tion, which may serve as an example for other stones that are not unlike them in substance.

Having finely powder'd both the one and the other of these stones, and mix'd them with their weight of Sulphur beaten in a Mortar, make them red-hot in a Crucible over a good Charcoal-Fire, and so by degrees at several times make projection of this mixture, before you put in any more, continuing your fire till all be projected, and that the Sulphur be all consum'd; then having beaten the Residue over again in a Mortar, and put it into a glass-Cucurbit, make a mixture of two parts of Vinegar distill'd, one part of good Spirit of Salt, and one other part of good Spirit of Honey well-rectify'd, and pour it upon the residue swimming above it about four fingers. Then having plac'd the Cucurbit in a Sand-bath, and cover'd it with a Paper, kindle underneath a good soft fire, only enough to give the substances a lukewarm heat, stirring them from time to time with a wooden Spatula, till you find that the Menstruum be sufficiently impregnated with the substance of the stone which it has dissolv'd. After which having pour'd out by inclination, and set apart the liquor that swims at the top; pour upon the residue, the like quantity of the same fresh Menstruum, placing the Cucurbit again in the same bath, keeping it there as long as at the first time. Then mixing this liquor with the former, and having filter'd them, evaporate the superfluous moisture to the thin filme; if you desire a Crystalline Salt; or to the driness of the residue, if you only desire a Coagulated Salt at the bottom of the Cucurbit.

This Salt is highly esteem'd for breaking the stone in the Reins and Bladder, and to give great relief in all stoppages of Urine. You may give it from six to twelve or fifteen grains in Diuretick liquors. It may be also turn'd into liquor, by exposing it to the air; and make use of it, augmenting or abating the dose according to the proportion of liquors mix'd with it.

Men would go upon wrong grounds, did they beleive that these Stones afford all that quantity of Salt which is found at the bottom of the vessel, after these Menstruums made use of; for the Salt which they contain is very little: nor can we reasonably ascribe that which we draw from them but to the Salt part of Menstruums incorporated with the proper substance of these stones which they dissolv'd; the same thing befalling them, which may be observ'd in Quicklime, and Pearles, when they are dissolv'd in Vinegar distill'd, or in some other corroding Spirit; of which you more certainly prove the truth, by pouring upon these dissolutions, the liquor of Salt of Tartar, or any other Alkali; for you shall find by the conjunction of these Salts with the acids, the latter having abandon'd the proper substance of the Stones which they had dissolv'd, will shew it self by precipitating in powder to the bottom of the vessel like a Magistery. And if any be so curious as to dry and weigh it afterwards, they shall find that it weighs within very little as much as the stone weighed before it was dissolv'd in the menstruum.

CHAP. VI.

Of the Preparation of the Bloodstone.

THE Blood-stone may pass for the substance of Iron, not only because it has its properties, but also because you may extract that mettall out of it. It had this name giv'n it, either because of its vertue to stop bleeding, or because the colour of it resembles blood, though it be mix'd with brown streaks somewhat larger then those of Cinnabar.

Galenick Pharmacy only moistens the blood-stone with some Astringent water, and grinds it into powder upon Porphyry, to make and dry it into Trochishes. But Chymistry goes farther, making thereof considerable preparations, among the rest Distillations, Sublimations, Tinctures, and Extracts.

This Stone may be distill'd alone through a Retort, after the ordinary manner, and an acid martial Spirit drawn out of it with a gradual fire, like to that of Viol. But you may expect other advantages, observing the following method:

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Having finely powder'd two pound of Blood-stone, and two pound of Sal-Armoniack, mingle them together, and put them into a large Cucurbit of Potters-Earth well luted about, and having cover'd it with its head, and exactly luted the Commisures, place it upon a proportionable Furnace; then having fitted and exactly luted a Receiver to the neck of the head, make your distillation with a naked fire, very soft at first, but increasing the heat by degrees, to the utmost violence at last; and by this means you shall find in the Recipient a urinous Spirit, very penetrating, and of a yellow colour, and upon the sides of the Cucurbit above the substances, the Flowers, having the colour and smell of Saffron; for which reason it is call'd the Philosophers Aromatick.

Advantage may be afterwards made of that which remains in the Cucurbit; for having put it into a Retort daub'd over with lute, and having plac'd it in a Furnace of close Reverberation, you shall extract by the ordinary ways a martial Acid Spirit, containing in it also some small quantity of that of Bay-Salt, which made one part of the composition of Sal-Ammoniack. You may also extract a tincture of the Flowers; to which purpose having put them into a Matras, pour upon them Spirit of Wine well-rectify'd, about four fingers above the substances. Then having exactly luted the Matras, set it seven or eight hours in digestion upon a Bakers Oven; then filter and put up the tincture; which you may after that reduce into an Extract, by drawing off the greatest part of the Spirit of Wine through a glass-Alembick in a Cinder or Sand-bath, over a moderate fire.

The Acid Spirit of the Blood-stone participating very much of Mars or Iron is very opening, and of great vertue to unstop the obstructions of the Liver, the Spleen, and all the Bowels: it is also very diuretick. The urinous volatile Spirit proceeding chiefly from the Sal-Armoniack is diaphoretick, and very proper to purifie the whole mass of the blood. For which reason it may with great advantage be made use of in malignant Fevers, the Scurvy, and in diseases of the Head. The dose both of the one and the other is from five or six to twelve or fifteen grains in proper liquors. The volatile Salt, the Tincture, and Extract are highly esteem'd to mortifie Acids, and cure diseases of which they are the causes. The dose of the Tincture is from eight or ten to twenty or thirty drops: of the Salt and Extract from half a scruple to half a dram, mixing them in proper liquors, or else in Bolus.

CHAP. VII.

Of the Preparation of Crystal.

IT may be said of the most part of Preparation which writers would have practised upon Crystal, that they are only impertinent occasions to give men trouble, and to waste Coles, and to make us of other Materials and vessels without any hopes of profit or advantage. As we may observe by the Salt, Magistery, Liquor, Elixir, Essence, and some other preparations of this nature which they have labour'd to make of Crystal. For which they have made use of the utmost violence of fire, to which they would have the Crystal expos'd for a long time, and for several times, for the actual calcination of it in an open fire; and then they have made use of Salts and corroding Spirits to dissolve it. But we must be assur'd that the Salts and the liquor which we draw from thence, are nothing else but the Salts or corroding Spirits embody'd, which have corroded and dissolv'd the proper substance of the Crystal. For the ashes of the burnt-Lees of wine, the Salt of Tartar, the Niter, the Bay-salt, or Sal-Ammoniack, mix'd with the Crystal when it is calcin'd in the Crucible in an open fire, and the Vinegar distill'd, or the Spirit of Niter, which some make use of for the potential Calcination of Crystal, after it is actually calcin'd, doing an extream violence to the whole substance, cannot but change the qualities of it in an extraordinary manner, while they are really the thing which is call'd Salt of Crystal, and the principal substance of the liquor that bears that name, and for that the substance of the Crystal is totally dissolv'd therein, and in a condi-

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tion to be separated when you would make a Magistery thereof, or satisfy curiosity.

Whence it is easy to judg that the best preparation of Crystal is that which does least violence to nature, and changes least the properties of it. For this reason it may be very fitly made use of, after you have ground it upon Porphyry, and reduc'd it to a powder almost impalpable, or after you have several times made it red hot in the fire, and quench'd it as often in diuretick waters, enliven'd with Spirit of Salt or Vitriol; for by this means you may have a liquor, very fit to be made use of to open the passages of the Urine; and a powder of Crystal quench'd, good against weakness of the stomach and intestines, or to qualify the sharpness of Acids, and the Acrimony of the humours.

As to the Tincture which is forcibly extracted out of Crystal, after you have calcin'd it a long time with corroding Salts, and put it with them in fusion, we must attribute the red colour rather to the union, which the long digestion has produc'd of the most volatile parts of these Salts, with the Sulphury Spirit of wine, then to the substance of the Crystal dissolv'd in those Salts; in regard the same thing happens to Salt of Tartar digested with Sulphury Spirit of wine, without any Crystal being mix'd with it.

But after all these considerations, there is great reason to fear, lest the Chymical preparations which may be made of Crystal after its being reduc'd to a Lime, may not rather incline the matters which they meet with, in the passages of the Urine to Petrification, then dissolve or drive them forth, as it is intended they should do. For it is a hard matter to persuade a man, that the petrifying Ferment of these sort of Limes change their nature by the preparations which others make of them; or that they may not produce effects quite contrary to those for which they seem to be absolutely provided.

I see no necessity for me here to set down particular preparations of Flints; for besides that they require no other, but the same as Crystal, there is as much reason to fear the effects of their petrifying Ferment, as of that of Crystal.

CHAP. VIII.

Of the Preparation of Coral.

NO man contests but that Red Coral carries the preeminency above all other Coralls. And therefore that all Authors have practis'd their principal preparations upon this Coral; touching which I am of the judgment, as in reference to Crystal that it is better to stick to those preparations that are more simple, and less destructive.

The ordinary Pharmacy very judiciously reduces Coral into powder almost impalpable, grinding it upon Porphyry as it does other precious Stones. But it may be better done by making use of the Engine which *Monsieur Joel Langelot*, a most worthy Physitian to the Duke of *Holfatia* imparted to us, the figure whereof I have giv'n you in this Pharmacopœa.

For Coral having nothing in its substance which can serve to the purposes for which it is made use of in Physick, there is nothing requir'd but to open the body of it well, and all its parts, and to divide them almost into Atoms, which may be done by means of that new Engine; the effects whereof are so much the more recommendable, as being a great furtherance to all other preparations, which whether well or ill done, are attempted upon this mix'd body.

Actual Calcination of Coral, and reiterated Exinctions merit the name rather of destruction than of lawful preparations, as I have already made out in the Chapter of Crystal.

Solutions made in acid Spirits more or less corroding, to extract the Salt or Magistery, are as little to the purpose, because it is a potential Calcination, and for that there is no reason to expect any real Salt out of Coral, but only the Salt of the Menstruum embody'd with its proper substance. And because the Magistery which may be forc'd to precipitate in these dissolutions, is only the most earthy part of the Coral, it must give way to Coral finely powder'd, that has suffer'd no torture, nor lost any thing of its substance.

As for the numerous preparations of the Tinctures of Coral, with which some Authors are stuff; though we may find some that have some appearance of Truth, and benefit, yet can they not be altogether entitled Legitimate, especially when the Coral is expos'd to the violence of the fire, or to corroding Salts or Spirits. For besides that it is impossible that the Coral should communicate its colour which it has lost by the violence of the fire, or corroding Spirits, we must not look upon the red colour which appears in ordinary Menstruums to be other then an effect of long digestion. We must believe also that it is not a small matter to separate the red colour of Coral, and to carry it into another subject with its principal virtue.

The Freturation of Coral by means of the Engine of *Monsieur Langelot*, is incomparably much better, then all the Calcinations that can be made use of. For without changing the nature or the qualities of the Coral, it facilitates its dissolution, and provides a way to accomplish what is intended by means of more gentle Menstruums. Among the rest by the Spirit of Honey and Turpentine; by juice of Lemons, Barberries and the like, by those of several woods, by those of Salt and Vitriol dulcify'd, and united with Spirit of wine, and by the last enliven'd with Flowers of Sal Ammoniac, or some other Salt, and they may more easily after this in a Cornute extract the specious Tincture of Coral, then as some have practis'd by mixing it with equal parts of Sugar-Candy. And therefore raw Coral beaten to an impalpable powder, and giv'n in some Liquor or otherwise, is far superior then all the Tinctures of it; though these are least to be rejected, where the Coral has been dissolv'd with less violence, and whose Menstruum was less corroding, and may be the most securely taken inwardly.

The little esteem I give to these Tinctures has kept me from swelling this Chapter with their preparations, of which you may see a great number in *Scroderus*, *Grullengius*, and several other Books. I shall only insert that which *Monsieur Langelot* has some while since imparted to publick view, as well for the particular esteem which I have for his learning and knowledge, as for the softness of the Menstruum which he makes use of, the virtues of the fine Tincture which seem to appear in his preparation, and the hopes I have of it's success upon the word of such a Man.

This Author says, that having for some years before pour'd upon certain whole fragments of Coral an oil which he thought to be the gentlest among those which are drawn from Vegetables, with a design to try whether or no he could draw any Tincture from them, a good while after perceiv'd that neither the Oil nor the Coral had suffer'd the least change, and so being out of all hopes, neglected the vessel that contain'd them. But the winter being pass'd, and he busy about other Operations which he was experimenting in a Furnace of digestion, he remember'd himself, and put the Vessel containing the Coral into the same furnace; and about a month after stirring the substances as he was wont to do, he perceiv'd that the red colour of the Coral was somewhat height'nd, and that the Coral was grown softer, though the Oil were not chang'd at all. Then continuing digestion with the same heat of fire, he found some days after that the Coral was dissolv'd, and turn'd into a Muscilaginous kind of substance, and that very red, though the Oil that swam above it had not chang'd colour. He says moreover that he could not change the said Oil, nor unite it with the Muscilaginous matter, what ever stirring or digestion he us'd afterwards. For the Oil remain'd at the top, and the Muscilaginous matters descended to the bottom. He affirms moreover, that finding the oil to be of the same scent and taste as before, he pour'd it into another vessel, and having pour'd the Muscilaginous matter, the Spirit of wine Tartariz'd, and so leaving a very little while to digest, the whole substance dissolv'd into a very red Tincture; which he attributes to long digestion, and the great effects which volatiles are able to produce, when you have put a stop to them. Some think that he made use either of the distill'd oil of Anise, of Citron peel, or Juniper berries to soften the Coral, and to dispose them to yield their Tincture.

I cannot boast to have tryed this preparation, but I intend it in a little time; I believe also that the success corresponding with the writings of *Monsieur Langelot*, as there is great probability of it. This Tincture of Coral ought to pass for the best and most legitimate that ever was invented, and that with much more reason, those virtues may be attributed to it, which have been allow'd to the other Tinctures, as well to strengthen the heart and liver, as well to open the obstructions of the latter,

latter, and to redress all its distempers, as to purify and renew the whole mass of the blood, and to give notable relief in diseases that happen from its alteration. It is no less priz'd against weakness of the stomach, and of the intestines, which cause vomitings, Diarrheas, Dysenteries, or Lienteries, and in all losses of blood either in men or women.

CHAP. IX.

Of the Preparation of Pearls.

THE engendring of Pearls in the Shells of certain Fish very much resembling the nature of Oysters, seems to make it reasonable that we should place them among Animals; if their whiteness, lustre, hardness, weight, and solidity of their parts, did not place them in the rank of the most precious stones. These qualities have been the reason that Physick has from time to time conceiv'd a very good opinion of them, and has believ'd that their virtues, if not superior, yet are not inferior to those of any precious stones. This conceit has encourag'd several Chymists to make several preparations of them, and has caus'd them to fall into errors as dangerous, if not more then those which concern Coral. Operating here upon a substance of far greater price, and not only more pure, and brought to a higher perfection by nature then Coral, but which is much more qualify'd to receive with ease all sorts of good or bad impressions.

Ordinary Pharmacy grinds Pearls upon Porphyry, moist'ning them with Rose-water, or some Cordial-water, and like Coral and other precious stones. This preparation, though very plain, is much better then some which the Chymists have invented, provided you break the Pearls whole upon the same Porphyry, and that you continue to grind them, till they are pulveriz'd to an exact fineness. To which purpose there is nothing like Monsieur Langelot's Engine. For Pearls retaining something of the nature of Animals, and being of a substance in part volatile, they compleat their dissolution in the heat of the stomach, or rather by the operation of the *Archeum*, especially when they are finely pulveriz'd, so that by a quick digestion, what they contain of most essential, is suddenly convey'd to the heart, and to the parts which have need thereof.

But to satisfy those that believe that Pearls are in a better condition to impart their virtues when they are dissolv'd into liquor, they must understand that Pearls may be dissolv'd in the juice of Lemons, well purify'd by digestion; which may easily be brought to pass, by putting into a Matraass or a glass Cucurbit, about an ounce of Pearls well ground upon Porphyry, and pouring upon it the juice of purify'd Lemons depurated, three fingers above the substances, and placing the Vessel in a temperate Sand-bath, where it is to be left three whole natural days, stirring the substances from time to time; after that pour out the clear liquor by inclination, filter it and put it up in a Bottle, mingling with it the same measure of Spirit of Roses. This liquor is to be taken in Cordial-waters from eight or ten drops to twenty or thirty. You may pour new purify'd juice upon the Pearls that remain in the Vessel, and having made maceration, proceed in all things as before; and reiterate the same operations, till the Pearls are almost quite dissolv'd.

For the Salt and Magistery of Pearls, of which some Authors make so great an account, they are neither the one nor the other more to be valued then those of Coral. For the first is nothing but the Salt of Vinegar distill'd, embody'd with the substance of the Pearls which it dissolv'd; and the latter only the terrestrial part of the Pearls, depriv'd of their pure substance, which the Dissolvants and Precipitants have got to themselves.

The Oil or Liquor of Pearls, drawn forth for want of its Salt, is no better, for the same reasons; no more then the Essences, Tinctures, Arcanums, Flowers, or Spirit, which are drawn forth by the help of corroding Menstruums, which are rather Destructions then Preparations.

Pearls beaten to fine powder are recommended to strengthen and comfort the heart and the Noble parts, to resist Poison, the Pestilence, malignant Fevers, and to restore persons that are feeble and languishing. It is giv'n in Cordial waters or in broth from half a scruple to half a dram. It is mix'd in Tablets, Opiates, Portions, and several other remedies. The virtues and use of Pearls dissolv'd in the juice of Lemons, and in Spirit of Roses, are very near the same.

This occasion of Pearls obliges me to tell my thoughts of the Chymical preparation of Emraulds, Saphires, Jacynths and other precious Stones; which is, that their substance being excessively hard, especially if they be fine and clear; and not being to be dissolv'd but by potent Corrosives, it is much better to let them alone upon your finger, in regard it is impossible to use those violent means without destroying the good qualities of the stones. I think it also much better to grind them upon Porphyry, like Pearls, till they are exactly fine, to which purpose you may make use of *Monsieur Langelots* Engine, to make use of them so upon all occasions. Though if credible Authors may be believ'd, the Stones have a quality to impart their virtues without preparation being worn in Rings, about the neck or arms, ty'd upon the legs or thighs, or others apply'd to other parts of the body, like other stones of less value, as the Eagle stone, the Nephretick stone, and several others.

CHAP. X.

Of the Preparation of Talk.

Talk, with the addition of Venetian, shining and silver-like, when it is divided as it may be into tender scales, but almost of a Sea green when it is quite whole, is that which of all the true or false Talks is most esteem'd, and about which a great number of people have exercis'd themselves from time to time, especially to draw forth an oil, which is esteem'd to be beyond all the Cosmeticks in the world and is thought to lie conceal'd in its substance, because of its sweetness, and unctuousity which may be perceiv'd by handling it, though it do not daub the fingers at all. I pass by the opinion that some have, that Talk red or yellow, contains in it self a Mine of Gold, and that a proper menstruum may be drawn from it for the transmutation of Metalls into Gold or Silver, and for the fixation and Tincture of Mercury; as also that it contains an universal medicine, able to cure all diseases that are tak'n to be incurable. I shall only say that the preparation of a true oil of Talk is no less difficult then the Transmutation of imperfect Metalls into Gold or Silver, of which many have, and still do boast, though the Talent which they pretend to, is not able to free them from the miseries that usually attend them to the end of their lives.

Calcination of *Venice* Talk, of all its preparations has been most sought after, and for which they have made use of all sorts of fires, the most tedious and most violent, even those of glass Houses. Exposing the Talk, sometimes alone, sometimes mingl'd with Silver, Copper, Lattin, Sulphur, Lime, Tartar Salts, and other corroding substances. For though there be in *England* a Talk proper to be calcin'd alone and to be reduc'd in less then an hour to a very white and crumbling Lime, and that there be in *France* of those false Talk's that will not endure the fire; yet they can never promise to themselves the same thing from that of *Venice*, but by exposing it above a quarter of an hour to a flaming fire, and making an Iron Mortar almost red hot together with one end of the Pestle; and then indeed they may reduce it in a small time to powder and that very fine, which may be presently sifted through a silk'n seirce, fit to be mix'd with Pomatums and other Cosmeticks.

This Talk thus pulveriz'd may be strew'd among shell snails, and left in a glaz'd Pipkin till they have suckt it up all; then having bruis'd them, with all their shells, and put them into a Glass Cucurbit, cover'd with its head, distil the whole mass, and there will come forth a water, very proper to clear Complexions of Ladies.

They

They who mingle Salts among Talk, to assist and forward Calcination, are wont to expose it to the moisture of a Cellar, after they have expos'd it, or else in the open Air, to procure a Liquor, which they call oil of Talk; But very improperly, in regard that Liquor is nothing but a Salt dissolv'd in the moisture that has got within it, and is impregnated with particles of the Talk, which it has corroded and dissolv'd.

Crollius, and some other Modern Authors in imitation of him, thinking to do better, direct you to prepare a Spirit of Vinegar of *Spanish* Wine, and to have it more penetrating, to choose that which distils from the last half of the Vinegar; and after you have divided the *Venice*-Talk into thin pieces, to put them into a Matrafs and moisten them well with Spirit of Vinegar, till the substances are at length become Mucilaginous, and as it were Oil, to the end you may thereby know the dissolution of the Talk. After this they direct you to put the whole into a Luted Cornute, set in a close Reverberatory; to which having fix'd a large Ricipient, first with a gradual fire they draw off the Spirit of Vinegar, then the white Oil; the effects whereof are to beautifie the Complexion, and will remain above a month after single Unction.

The little likelihood of succeeding in this Operation, hinder me from making the Experiment; and therefore I will neither promise nor warrant any real Oil of Talk. Nor will I undertake to Calcine true *Venetian*-Talk in half an hour with a small fire, and to make it spongy, and in a condition to be rubb'd between the fingers into an Impalpable Powder, as *Monsieur Morbosi*, in his Epistle Treating of the Transmutation of Metals, dedicated to *Monsieur Joel Langelot*, assures us. Though I will not deny the possibility, since there is some reason to hope that so Famous a Man will one day Communicate in Publick a Preparation of so much Curiosity.

CHAP. XI.

Of the Preparation of Common Salt.

SALT generally taken, is as it were the Foundation, Soul, Subsistence, and the Principal Secret of the Life and Preservation of all mix'd Bodies; there being no mix'd Body that has not its proper Salt, more or less in quantity, and which does not lose it's principal Qualities, when it loses its Salt. But we are to look upon the Sea Salt as the most abundant in Nature, and as the Foundation and Seed of all other Salts. For being dissolved in a vast quantity of Water, and in a posture ready to be convey'd to all parts of the Earth, either through the Subterranean passages, or by the rins proceeding from the vapours rais'd by the Sea; all other Salts borrow from it their Principal parts, not alter'd from it, but only in the change of Form, and the Situation of these parts, or by the Dissolvable substances that are mix'd with it, and make the diversity of Salts. For Vitriol, Niter, Alum, and Sal-Armoniack, have all of them some parts of the Sea-Salt for their Foundation; nor are they diversify'd, but by the strange bodies which they have met with and dissolv'd, or they are Artificially bleaded. Sal-Gemm ought to be accompted a real Sea-Salt, depriv'd of the most part of its moisture, and coagulated by the Subterranean heat, or by that of the Sun. That which is drawn from Salt Fountains, is much of the same nature with Sea-Salt, as coming from the Sea through Subterranean passages: their great difference consisting in the manner of separating their moisture; considering that we make use of fire to evaporate fresh water, of Fountain Salt; whereas in hot Countries, they make use of the heat of the Sun to consume the moisture of the Sea; which Salt is most esteem'd, because it suffers less alteration in its parts, then that which has endur'd an ordinary fire.

The use of Sea-Salt is much more for the seasoning of Meats, then for Physical preparations; and the first preparation of it, is to purifie it: To which purpose, having dissolv'd it in Fountain, or River Water, and filter'd this Dissolution through coarse Paper, evaporate the moisture in some Iron-Kettle, or Caldron, till the Salt remain white and Crystalline at the bottom of the Vessel. This way of purifying serves

serves not only to separate the Earthy parts of the Salt, but it qualifies its Acrimony, and makes it fitter for all sorts of uses, especially for nourishment; above all if you reiterate Dissolution, Filtration and Coagulation.

But because that notwithstanding the first and second evaporation of the Salt, there still remains some particles of water in its proper substance, and that the strict Union of the Acid with the Alkali, the close binding of the parts, and the Cubick figure of the grains of Salt, so straitly enclose these particles of water, that having expos'd these grains to the fire they cannot get out, but by offering violence to their bonds, and by causing the parts of the Salt to leap with a kind of flashing; and for that overmuch of that leaping and flashing of the Salt might chance to break the Glass, where the Salt is put to distil, there is a kind of Calcination or drying us'd, which is call'd *Decrepitation*, because of the crackling of the Salt while it is over the fire: and because that Crackling is either more or less according to the bigness of the grains, having dry'd the grains of Salt in an Oven after the bread is out, bruise it in a Mortar, and put it in a pot that is able to endure the fire, and placing it in a Furnace over a good Coal-fire, and stirring it from time to time with a long Iron Spatula, let it stand so till the Salt has done crackling, which is an evident sign of the dissipation of the particles of water, which were mix'd confusedly among the Essential parts of the Salt. Which you may sooner bring to pass, if when you beat the grains of Salt in a Matraass, you beat them so small, that the Alien particles of the Water may the more easily issue forth. As touching the fusion of Salt it is more facil, then necessary. For they that will have it so need no more but put the Sea-Salt powder'd into a Crucible, and expose it to a Melting or Fusion-Fire, which hinders not but that you may at any time dissolve it in water, both before and after this operation.

CHAP. XII.

The great Inclination that Sea-Salt has to Fusion.

THE impossibility for any Cornutes of Earth or Glass to continue this Salt in Fusion long without breaking, and the strict union of the Spirits with the other substances, while the Salt is in Fusion, enforce us to make use of other substances, by the mixture whereof we divide the parts of the Salt, and preventing Fusion, constrain it to surrender its Spirit by the ordinary ways.

Not but that you may extract an acid Spirit of Salt without Addition, if after a perfect Decrepitation of the Sea-Salt, and after you have kept it a long time over the fire, you expose it afterwards to the Air for several days; for the more fix'd part of the Salt having lost over the fire the most part of its Acid, and being as it were famish'd easily impregnates it self with the Acid Salt of the air which embodying with this Salt, augments its quantity. And because the acid Salt of the Air is naturally more volatile then the acid of the Sea-Salt, and because it easily separates it self without the help, it is no difficult thing to distil it without Addition. But the Spirit which is drawn from it, being almost nothing else but this acid of the Air, there is no reason to call it the Spirit of Sea-Salt, nor to account this Preparation, no more then such an augmentation of this Salt for any great Mystery; in regard the same corporifying and augmentation happen to Allum, Niter and Vitriol, by the conjunction of a new acid, when you have drawn off its Spirit; and for that Lead, Antimony and several other more compacted bodies then Sea-Salt, augment by means of the Air, which pierces into their pores instead of the other substances which the fire had driv'n away.

Take two pound of Sea-Salt well-dry'd and powder'd, and eight pound of Potters-Earth, or Bole, or earth of *Blois*, pulveriz'd in the same manner; and after you have well mix'd one of these Earths with two pound of Salt, put the whole into an Earthen Cornute well luted, so large that about a third part may remain empty: place

place the Cornute in a close Reverberatory, and stop the Register of the Duomo; kindle a small fire of Coals in the fire-place, enough to heat by degrees the Furnace and the Cornute; and having continu'd it so for an hour, begin to increase the fire insensibly, and after that from degree to degree; opening by little and little the Register of the Duomo on the side of the neck of the Retort; and when the flegm distils, keep the fire in the same condition, till you see certain white vapours come forth from the neck of the Cornute. At which time fit a large Recipient to it, and having carefully luted the closures, encrease the fire still by little and little, and proportionably open the Register of the Duomo, encreasing yet more the fire from degree to degree to the utmost violence, till you see that no more vapours come forth of the Cornute, and that the Recipient becomes clear. Then giving the Vessels liberty to cool, and having unluted the Recipient, you shall find a yellow acid Spirit, of a very pleasing colour, accompany'd with some flegm, and in the neck of the Recipient some little volatile Sal fix'd to it.

You may also instead of drying the Sea-Salt, dissolve it in water, and having made a kind of a pickle, imbibe the same Earths or Bole in it; then having made a Paste of it, somewhat solid, make it up in little Balls as big as will go into the mouth of the Cornute; and having perfectly well dry'd them in the Sun, or in the open air, fill the two thirds of a Cornute; then observing my last directions, you shall draw forth a Spirit like that already mention'd.

Some there are that cohobate this Spirit upon that which remains in the Cornute, and after they have made the mass into little Balls and dry'd it, they make a new distillation, reiterating several times the same cohobations and operations, the better to separate the spiritous part of the Salt from its body. And for that this Spirit contains very much flegm, you may pour it out into a small glass Cucurbit, and having plac'd it in *Balneo Maria*, and cover'd it with its head, and fitted to it a small Recipient, rectifie it over a gentle fire. For by this means the flegm ascending first, will leave the acid Spirit at the bottom, which will be more or less penetrating, according to the quantity more or less of flegm which you have separated by rectification. 'Tis requisite to save this flegm, for notwithstanding the soft heat of the Bath, it has carried with it some of the acid volatile particles of the Salt; which not only render it diuretick, but also proper to allay the heat of cholerick Fevers. You may also concenter this Spirit by rectifying it in a Sand-bath, when you desire to make it fit for the dissolution of Gold.

There is also a Spirit of Salt to be prepar'd, by mixing two pound of Alum, burnt to powder, with three pound of Salt well dry'd and powder'd, and distilling them together through a Cornute the ordinary way. But the Spirit participates as well of the one as the other; however it may serve for several precipitations, and is a powerful opener and diuretick.

You may also mix equal parts of Sea-Salt and Salt of Niter, well dry'd and powder'd, with four times as much of their weight of Bole, or Potters earth Pulveriz'd, and after you have put them into a Retort, set them into a close Reverberatory. Thereby you shall draw forth a Spirit compos'd of two Salts, commended not only for the cure of the Dropsie, and to consume the proud flesh of Ulcers, but for the immerfive calcination of Gold and Silver.

Some Authors have pretended to prepare a Spirit of Salt impregnated with the vertues of Coral, mixing with the Salt the Coral ground upon Porphyry, instead of Potters-Earth, or those other substances which are made use of in the distillation of it; but the acid part of the Salt acting more inwardly upon the Corals then it could do upon the Earths, corrodes them, and in corroding embodies it self with their parts; so that resting in the Cornute, there can be nothing expected but an unprofitable flegm; and therefore it is more to the purpose separately to make use of the Salt, and the Corals, as occasion requires, then to mix them to no advantage.

CHAP. XIII.

Of the Dulcifying of the Spirit of Salt.

THE inconvenience which the acidity of the Spirit of Salt may bring to some persons, especially those whose diseases proceed from acids, have enforc'd most Artists to have recourse to diverse fix'd or volatile Salts, which they have mix'd with this Spirit to qualify their sharpness and sweeten their effects. For besides that they mix with this Spirit Salt of Wormwood, and many other Salts of Plants, as also with the volatile Salts of Animals, to fix them, while it fixes it self and incorporates with them; they mix it also with equal parts of Spirit of wine, the volatile and Combustible Salt whereof inwardly uniting it self with the acid parts of this Spirit, makes one Composition of two, of a sweet and pleasing odor, and of a taste less acid, the use and vertues whereof are incomparably better appropriated to the diseases and to the habitude of several persons then the ordinary Spirit of Salt. For which reason it is call'd the sweet or Dulcify'd Spirit of Salt. For the preparation whereof, fill about two thirds of a Glass-Cucurbit, with equal parts of Spirit of Salt and Spirit of Wine, and having plac'd it in a Sand-bath, and cover'd it with its head perfectly well-luted, with a Receiver luted in the same manner, begin your Distillation with a moderate fire, which you must continue, till the whole be almost distill'd. Then having cool'd the Vessels, and pour'd out the distill'd Liquor into a new Cucurbit, re-distil it in the same Bath, and reiterate the same operation the third time. By which means these two Spirits being perfectly well-united together will produce effectually the advantages expected from their Union.

All Authors highly recommend the Spirit of Salt to open the passages of the Urine, to cut and loosen Viscous and Tartarous Matters, and to open the obstructions of the Liver, Spleen, and the rest of the Bowels. For which reason it is success-fully prescrib'd in Dropsies; and in diseases that proceed from obstructions of the Vessels. In all which cases the Dulcify'd Spirit is highly to be preferr'd before the other. Both the one and the other are very good to quench Thirst, giving them from five or six to twelve or fifteen drops, in some proper Liquor. Or else you may put as much as will yield a pleasing sharpness in your ordinary drink. This Spirit is very good to kill Childblains in the hands or feet, before they come to be ulcerated; anointing the part affected with a Feather. It is also good to cleanse and make white the Teeth, to take off the rottenness of the Bones, and to consume the proud flesh of Wounds and Ulcers. The first Spirit of Salt well-rectify'd is us'd for the dissolution of Gold. It is useful also for the precipitation of Minerals dissolv'd in Aqua-Fortis or with Spirit of Niter. But you must not impute this precipitation to the weight nor the force, nor to any justle or shog which it gives the Aqua-Fortis, or to the matters dissolv'd, as some have thought, but through the Conjunction of the acid of this Spirit to the volatile and Sulphury Alkali of the Aqua-Fortis, or Spirit of Niter, which constrains the latter to abandon that part of the Mineral which it had dissolv'd.

And to shew you that neither this nor any other precipitation happens through the weight or force, or any shog or justle, which this or any other Spirit can give to the Dissolvent or the matter dissolv'd, but that it is the reciprocal conjunction of Alkali's to Acids, or the enfeebling of the Dissolvent, or the addition of some new Matter, which the Dissolvent may penetrate afresh, which causes the precipitation; we find that the Spirit of Salt not being able to unite it self but with the volatile Alkali of the Aqua-Fortis, is not able to precipitate any more then what the Alkali had dissolv'd; whence it comes to pass that the precipitation is neither very quick nor copious, because the acid part of the Aqua-Fortis still retains that part of the Mineral which it had it self dissolv'd, not being able to unite with the Spirit of Salt. But if after the Spirit of Salt has done working upon the Mineral dissolv'd you pour upon it the Liquor of Tartar or the fixt Salt of Niter, with which the acid of the Niter has a great willingness to unite, there will presently follow a new precipitation, which will be more plentiful then the former. By which you may understand the true cause of the principal Precipitations, examples whereof you shall find in the following discourse.

CHAP.

CHAP. XIV.

Of the Preparation of Salt of Niter.

SALT of Niter commonly call'd Salt-Peter, or Salt of the stone, by others the *Dragon, Cerberus, Salt of Hell*, by reason of the violent effects which it is able to produce, is accounted a Sulphury Salt, because of its quick disposition to fire such substances whose parts are mix'd with Brimstone upon the fall of the least spark of fire; though of it self it will not take fire in a Crucible red-hot; unless you mix some Coal with it, the substance whereof contains something of Sulphur. We find in Niter three sorts of Salts, a volatile Sulphury Salt, a volatile Acid, and a fix'd Terrestrial. Nevertheless the natural union of these three Salts is not so firmly knit, but that an Artist can separate them at his pleasure.

We find in *France* three sorts of Salt-Peter, the one fix'd to certain Rocks or Walls in little white Crystals, the other mix'd among the Earth of certain Cellars, or some old Stables, and the third among Rubbish or the Ruines of old Walls.

The Salt-Peter-Men put these Earths or any other substances containing the Salt-Peter in great Cauldrons over the fire, with as much water as is convenient, and having made lyes of the Salts, they filter them, then they Coagulate the Salt, which they dissolve, filter, and coagulate again, not only to make it more pure, but as much as in them lies to separate it from the Salt of the Earth; which is usually mix'd among it, and which lying under Peter the Salt, very much partakes of the taste, shape, and nature of the Sea-Salt. The easiness to procure Salt-Peter fine, is the reason why we never trouble our selves to depurate it. It being enough to choose it white, transparent, in long Crystals full of Angles, in length forming a kind of a Cylinder. This Salt is of a Saltish acid taste, with some bitterness. Besides all these marks the purity of it is known by putting some little piece of it under Coals well kindl'd, and then if it consume almost all away immediately, so that there remain upon the Coals only a little white Salt, which is the fix'd Salt of the Niter. The Salt-Peter first Crystalliz'd, and which is drawn from the first water, is that which has all the true Marks, and is esteem'd the best.

The purifying of Niter makes it fit for all uses, especially to be taken inwardly. It is also the beginning of all its other preparations; of which the most frequent is that of its Calcination, the which is done more or less, according to the quantity, more or less, of its parts which you intend to separate. That which is done for the preparation of Mineral-Crystal is the slightest. For then it suffices only to put one pound of the best Niter in a Crucible, set upon a *Treves* in a Furnace, in the midst of live-Coals; where having melted it, cast upon it at several times one single ounce of Flower of Brimstone, which you must cause to burn and consume upon the Niter; then pour it out spreadingly over the bottom of a clean Iron Skellet or Kettle, and having cool'd it, and broke it to pieces, put it up in a Glass or Gally-pot well stopp'd. They have also given the name of *Sal Prunella* to Mineral Crystal, because tis an excellent remedy against inflammations of the throat, especially the Squinancy, which some call *Pruna* or *Prunella*, especially when those diseases are caus'd by volatile Salts, and have newly seiz'd the Patient. For the acid of the Niter uniting it self with the volatile Salts, changes their nature and prevents their Effects. This Crystal is also call'd by the name of *Mineral Anodine*, because it is good to assuage pain, particularly those that are caus'd by fix'd and volatile Salts. It is opening, diuretick, and proper to cut viscous and Tartarous humours. It is mix'd among purgatives as a Vehicle, and in divers Menstruums to assist in the extractions of the Tinctures of mixt bodies, and to lighten the colour. It resists putrefaction of the humours, and quenches thirst and the burning of Fevers, taken in a small quantity in convenient Liquors.

They who have been acquainted with the heat of the most volatile and Sulphury part of Niter, thought they did well to burn a top of it the flowers of Sulphur to consume and carry that part away with them; which is grown into custom, and is not to be rejected, because of the good use which is made of it every day: though instead of that, you may make use of Niter it self very pure and in Crystals.

CHAP. XV.

Of the Fixation of Niter.

All Salts in general being separated from other substances, though dissolvable in Liquors, carry the name of fix'd, though they be in a condition to endure the fire. Which cannot be done but by stopping their volatile part with acid Spirits or Salts, or with other substances, which may incorporate with them, out of their particular disposition to unite together. Niter being compos'd of a volatile Sulphury Salt, an Acid Salt somewhat volatile, and a fix'd Salt, it is a hard thing to find one Salt or one Spirit, able to fix all parts at a time. For if you mix only volatile Salts, some part of the other Salts will dissipate with them. And if you make use of new acids to stop the Salts, the excess of the acids will cause the dissolution, and change the nature of the whole. So that go which way you will to work, in fixing the Niter, you must lose a good part of its volatile part.

According to *Glauber* you may put three or four pound of good Niter in a large Iron-Crucible plac'd upon a Trevet in a proper Furnace, and having kindl'd Coals round about it, and forc'd the Niter to Fusion, cast upon it about half an ounce of powder of Coals, which will immediatly take fire, and begin to dissipate the volatile parts of the Niter. This half ounce of powder being consum'd, throw on as much more, and renew the same projection and consumption, keeping the same fire, till there be little or no acid part left in the Niter, nor any thing at all combustible, till the powder of Coals take fire no more, and the Niter look of a greenish colour enclining to blew. Then take the Niter out of the Crucible, while it is yet hot, you may if you think good put it up as it is in a double-glass bottle exactly stopp'd. Or else you may dissolve it in water, and having made a Lye, Filter it and Coagulate the Salt, which you may put up as you did the former. This Salt having lost in its Calcination with its Combustible volatile, almost all that it had of acid, you cannot Crystallize it in that condition, as you may Crystallize Mineral Crystal, which having endur'd only a slight Calcination, contains almost all its acid upon which depends Crystallization. However you may easily restore to it its Crystalline figure, by pouring Spirit of Niter upon its filter'd Dissolution, till Ebullition cease. For by consuming afterwards this liquor to a Film, and leaving it to cool, you shall find Crystal like those which the Niter had before it was put into the Crucible, and the weight and bulk of the Niter augmenting the Spirit which is impregnated with it.

Glauber directs that having calcin'd the Niter, as I have shew'd, with powder of Coal, having tak'n it out of the Crucible, and put it into some convenient vessel, you should expose it to the moisture of the Air, or Cellar, till it be dissolv'd into Liquor, to which he gives the name of *Alkabeft*, pretending to make a Universal Menstruum thereof, by means of which to extract Tinctures from all sorts of mix'd Bodies, as well Vegetables as Animals and Minerals. But though it may be made use of for the Menstruums of several Minerals, yet there are others much more gentle for Vegetables and Animals.

Some persons dissolve Niter thus calcin'd in Spirit of Vinegar, filtering the Dissolution and Coagulating the Salt, reiterating three times, Dissolution, Filtration and Coagulation. Then having dissolv'd this Salt in good Spirit of Wine, and having put the Dissolution into a Glass-Cucurbit cover'd with his head well-luted, with a Receiver well luted to it also, they draw forth the Spirit of Wine in a Sand-bath with a moderate fire, to the dryness of the Residence, and find at the bottom of the Cucurbit a Scaly Earth like Talk, meltable in the fire like Wax, containing the fix'd Salt of Niter, impregnated with the acid of the Vinegar. Which remedy he recommends to open the obstructions of the Liver, Spleen, and Mesentery, giving from one Scruple to two in opening Liquors, or else mix'd with Purgatives.

CHAP. XVI.

Of Salt Polychrestes.

I Add to the fixation of Niter the preparation of Salt *Polychrestes*, because that by its means the Niter becomes fix'd, losing all that it had of volatile. The invention of this Salt is not so ancient as the word *Polychrestes*, which several Authors formerly gave to Pills, and other Compositions proper to purge several bad humours at a time; for we find but some new Writers who have mentioned it, and propos'd the use of it, though it be now more common in *Paris*, then a great number of other preparations with which the ancient Volumes are fill'd.

To prepare this Salt after the ordinary manner, take equal parts of good Sulphur and Niter in Crystals; and having coarsely powder'd them, set a large Crucible upon a Trevet in the midst of the fire-place of a Wind-Furnace, where having kindl'd a good Coal-fire round about it, and heated the Crucible red-hot, throw in about an ounce of the powder, which will take fire immediately, and the Sulphur consuming it self, will carry away with it the volatile part of the Niter; the flame being over, make the same projection of the powder into the Crucible, which you must reiterate from time to time, still giving the Sulphur time to consume it self, and stirring the substances by intervals with a long iron-Spatula. Thus continue to do, till you have projected all the powder, or that the Crucible can contain no more. After which having continu'd the fire for two or three hours, leave the Crucible to cool, take out the powder and dissolve it in water; and having filter'd and evaporated the dissolution over the fire, till it be cover'd with a film, leave it to cool; then having pour'd out by inclination the liquor that swims at the top, into a small Cucurbit, you shall find the Salt *Polychrestes* at the bottom; and about the sides of the Vessel, whence you are to take it forth and dry it. Afterwards evaporate it in a Sand-bath over a moderate fire, the liquor which you pour'd into the small Cucurbit, till it be cover'd with a film; then take out the substance and dry it, as you are to do the first. Thus you must do with the liquor that swims above the Salt; to make the best advantage of that which remains; afterwards mingle and keep all the Salts for your use.

The dissipation of the acid and Spiritous part of the Niter, during its Calcination with the Sulphur, is the reason that the Crystals which you take forth lose the form which those of the Niter had, before they were put into the Crucible. Nor could you have it in Crystals, had not the Salt retain'd some part of the acid of the Sulphur, during its Calcination with it.

But for as much as the Salt *Polychrestes* prepar'd in this manner, contains in it only the fix'd part of the Niter, and some part of the acid of the Sulphur, and that it cannot act in this condition but only by the Salts, like Salt of Tartar, and other fix'd Salts. You may make it besides that partly Diaphoretick, and partly Diuretick, by adding and incorporating four ounces of Salt Armoniack, with a pound of Salt *Polychrestes* prepar'd as I have shewn, and crystallizing them together again in a glass-Cucurbit plac'd in a Sand-bath over a moderate fire. For the proportionable union of these two substances, will produce a composition much more deserving the name of *Polychrestes*, then that whereof I have describ'd the preparation. For whereas the first works with Acrimony enough, and does not take the right Road of the Bowels, the Salts of the latter being reciprocally dulcify'd by uniting themselves together, operate in all things with much more gentleness. Not but that they easily penetrate the parts of the body, which have need of their operation; especially the parts of the Urine, the Veins, the Arteries, and also the fleshy parts, without leaving any impression of Acrimony.

Both the one and the other of these Salts are mix'd together from half a dram to a dram among several remedies, especially among Purgatives to quicken their vertue, mixing them in five or six ounces of Liquor. They are also given alone from two or three drams to five or six, in two or three pints of River-water, or in some Pilsan, to be drank at several draughts as you drink Mineral-Waters, for the cutting and loosening of gross humours, when you would expel them by the ordinary ways

CHAP. XVII.

Of the Spirit of Niter.

YOU should, according to the directions of some bruise, in a Mortar and mingle together two pound of Niter, and six pound of common Bole, and having made up a paste somewhat solid with a water impregnated with Niter, which it has dissolv'd, make little Balls thereof; and having dry'd them, distil them through a Retort according to the ordinary Method. But the best way and least troublesome is this. Having beaten in a Mortar and mix'd together two pound of very good Niter in fair Crystals, and four times as much the weight of Potters-Earth, exactly dry'd and beaten to powder, put them into an Earthen Cornute or Retort well luted about, so large that the substances may not fill above two thirds of the vessel, and having plac'd it in a close Reverberatory, and fitted and well luted a large Receipient to the neck, make your distillation with a Gradual fire, increasing it from three hours to three hours, and at length to the utmost violence of heat; continuing it so, till you perceive an apparent diminution of the redness of the Spirits in the Recipient, and that the heat of the Receiver be sensibly abated, which will fall out after you have given the last fire for three hours. After which, having stopp'd up the Register of the Duomo, and the Dore of the fire and Cinder place, and left the Furnace and the Vessels to cool, unlute the Recipient, moistning the Lute with a wet cloth, and taking it away from the neck of the Cornute, empty the Spirit of Niter into a double Glass bottle, which must be carefully stopp'd, and keep it for your use. You may receive apart the watry part of the Niter which comes out first in Distillation, forbearing to lute the Recipient till you have drawn it forth. And by this means you will have a Spirit of Niter that will work with much much more force, then that which is mix'd with its Flegm.

The Sulphury Salt part of the Niter, being joyn'd to the acid part comes forth out of the Cornute in red vapours, and dissolves it self into Spirit; which has occasion'd several writers to give it the name of Salamanders-blood. Niter is also the only Salt that yields its Spirit in red vapours, the Spirits of all other Salts coming forth in white vapours. They that receive all together in one Recipient all that comes out of the Cornute or Retort in distilling Niter, find almost as much weight of the Liquor, as they had put in Niter into the Cornute. So that they who believ'd that all the Niter pass'd off into Spirit had no reason to think so. For besides that the Earth which is mix'd therewith yields, for its own part, much Flegm in this distillation, as also in that of the Spirit of Salt, it fails not also to unite to it and to retain in the place of its Flegm the fix'd part of the Niter. Whereas it cannot do this while it is alone, but unless it be mix'd with its proper fix'd Salt, or with that of the Tartar, or with some other of the same nature. By which you may judge of what it wants to resume its natural condition, since that if you would have it resume the body from whence it issu'd forth, you cannot do it without joyning to it a fix'd Salt of the same nature with that which remain'd in the Cornute at the time of the Distillation.

The Spirit of Niter is highly recommended against Malignity of Fevers, as also to suppress the Vapours that rise from raw Nitrous, and Tartarous matters; and to calm the boiling of the humours, by reason of its volatile Sulphury Salt united with its Acid. It is also an excellent remedy against Cholicks. It opens the obstructions of the Liver, Spleen, and all the Bowels; it dissolves curdl'd blood; and expells by sweat, or by insensible transpiration, the humours that are to be that way expell'd; which makes it highly esteem'd against false Pleurifies, against Rheumatisms and all sorts of moving pains, and the Dropsical Tympany. The dose is from half a scruple to one scruple, and also to half a dram in proper Liquors.

The sharp and gnawing parts of the Spirit of Niter render it fit for Corrosion, as also for the dissolution of all Metals, except Gold. Into which it cannot enter alone, because of the smallness and shape of the pores not able to give entrance to the parts of that Spirit, the bigness and shape whereof are very unfit for that purpose. Though you may bring it about, if you add the fourth part of its weight of Salt-Ammoniack, of Sea-Salt or Salt-Gemma, which causing a new change of its parts,

or forming them into subtle points, or a figure capable to enter into the pores of the Metall, make it fit to penetrate and dissolve the substance. It also dissolves several Minerals, and changes the emetick and purgative vertue of some into Diaphoretick, particularly Antimony.

The same Acrimony rendring this Spirit in some measure unfit for internal uses, you must have recourse to the Spirit of Wine, which is to be mix'd with it in equal parts, and a distillation to be made thereof in a Sand-bath in a glass Cucurbit, cover'd with its head carefully luted; which must be renew'd three times, to make an exact union of the parts of the Spirit of Niter with those of the Spirit of Wine, proceeding after the same method as for the dulcifying the Spirit of Salt. And from this union arises a compos'd Spirit, not only more agreeable in its smell, but more sweet to the taste, and more gentle in all its operations, and more agreeable to our natures, and which is more than all this, more fit to shew its diaphoretick vertue then the ordinary Spirit of Niter. The gentle qualities which it has, have giv'n it the name of sweet or dulcify'd Spirit of Niter. The preparation whereof may be very properly made in Vessels call'd *Twins*, or double Pelicans.) the figure whereof you may see among the rest) placing these Twins in a Sand-bath over a very moderate fire, filling about half the body up with each of these two Spirits mix'd in equal parts; luting well all their orifices and closures, and making a mutual and continual distillation of the Spirits for three days together, which must be accompany'd with a continual cohobation of that which distils, upon the substances which shall lye successively in the bottom of the Vessels. You may give this Spirit in the same, and also in a larger dose then the former, in convenient liquors.

CHAP. XVIII.

Of Aqua-Fortis's, and Regal Waters.

There is a greater difference to be seen in the choice, and in the doses of the substances, which are made use of for the composition of *Aqua Fortis's*, then in the manner of preparing them, which is almost the same. For though they be generally compounded of nothing but Salt-Peter and Vitriol, and that Niter be the foundation of them all, their quantities nevertheless are not alike in all Authors; besides that they mingle sometimes Allum, sometimes Verdigreese, sometimes Antimony, Arsenick, Sublimate, and Sal-Ammoniack, Sea-salt, Sal-Gemma, &c. without Vitriol or with Vitriol. Some also only dry and beat the Niter and Vitriol in a Mortar; others make use of the latter without calcining it to whiteness. Some also put two parts of Vitriol to one of Niter. Others put equal parts both of the one and the other. Some there are also that put the whole weight, or the half of their weights, in Bole or Brick beaten small; so that every Artist follows his own method. Which shall not hinder me from setting down here the most common preparation of *Aqua-Fortis*, that seems to me to be the best for corrosion and dissolution of the most part of Mettals, and some Minerals that resemble them in their Nature.

Having calcin'd to whiteness, and powder'd two pound and a half of common Vitriol, and dry'd and beaten in a Mortar the like quantity of good Salt-Peter, mingle them together, and put them into a large Cornute of Potters-Earth, cover'd over with lute; and having plac'd it in a close Reverberatory, and fitted and carefully luted a large Recipient to its neck, begin your distillation with a very soft fire, then increase it from degree to degree to the utmost violence of heat; and so continue it till you perceive the brown red-colour of the vapours in the Recipient to abate: and the heat of the same Recipient to slack'n. At which time having stopp'd the Register of the Duomo, and the doors of the Cinder and Hearth-place, leave the Vessels to cool; then having unluted the Recipient, and taken out the *Aqua-Fortis*, put it up in a double glass-Bottle perfectly well stopp'd.

The malignity which Niter and Vitriol contract, when they are united, and distill'd together, is the reason that the *Aqua-Fortis* drawn from thence, is much more dangerous.

dangerous, then the Spirits drawn separately from Niter and Vitriol. And therefore this water is never giv'n inwardly; the principal uses of it being for Immersive Calcination, and for the separation of Metals, whence it is call'd the *Causstick Water*, or *Water of departure*. And though we should do ill to say, that all the Corroding Spirits of Vitriol, may ascend in the usual time allotted for the Distillation of Aqua-Fortis; in regard that Vitriol endures the fire some days before it part with its last Spirits. Nevertheless we must believe that those of Niter carry away a good part with them, and as much as is necessary to augment their Corrosive quality. While the mixture of Vitriol with Niter serves to a double end, in regard that by imparting its Spirits, it keeps the parts of the Niter divided in the Cornute, and hinders Fusion, which would retain and concenter the Spirits, and break the Retort.

The malignity of Aqua-Fortis prevents the use of the Salt which remains in the Cornute after Distillation. For though that some famous Authors have very much esteem'd it, under the names of *Duplicate Salt*, or the *Two-fold Mystery*, the *Two-fold Allheal*, or *Salt of Two*, and have attributed to it very great virtues; yet it is a very hard thing to separate the vomitive and corroding quality that is inherent to the Vitriol. And so much the rather, because this Salt still contains the last and most sharp Spirits of the Vitriol, and for that the Niter which is mix'd with it, is become now more eager. I think too, that all the pains a man might take to dissolve, Filter, and Coagulate this Salt several times, would be in vain, as also the addition of Mineral-Crystal, which the same Authors direct to have done, the more easily to obtain from it the effects which they expect; in regard there are many other Salts which may be more to the purpose, and with far less danger satisfy their Intentions. Besides that according to the opinion of *Swelfer*, the residence of the Distillation of the Spirit of Vitriol may be so calcin'd, that there shall not remain behind any Savour of the Vitriol, and that by exposing it to the Sun or the open Air for several days, you may separate from it the Salt of the Air, which has fill'd its pores, which having neither sharp savour nor vomitive quality, but an acid Salt pleasing savour, is incomparably better and more proper to be mix'd with the fix'd Salt part of Niter: which you may extract by a Lixivium made of the settlement of the distillation of its Spirit, or else with as much in weight of Salt *Polychrestes*, or some other fix'd Niter.

There is another Aqua-Fortis to be prepar'd with equal parts of Niter, and Alum, distill'd together in a Retort, setting apart the Flegm that comes forth first, and putting up the Aqua-Fortis that follows it in a double bottle well stopp'd; as being a dissolvent very proper for Bismuth, Mercury, and for all other Minerals, and such other Minerals that serve to beautify the face.

But because these ordinary Aqua-Fortis's, though sufficient to dissolve Silver, and all other imperfect Metals, cannot do the same thing to Gold, we have recourse to the Salts Ammoniac, Gemmæ, and Sea-Salt; by the conjunction whereof, the points of the parts of these waters being sharpen'd, they dissolve Gold as easily as they did before the other Metals. And therefore they are called *Regal Waters*, as having power to dissolve Gold, which is the King of Metals.

You may Regalize Aqua-Fortis in a small time and very easily, putting into a small Matràs four ounces of good Aqua-Fortis, with an ounce of Sal-Ammoniac, beaten to a fine powder; or an ounce of Sea-Salt or Sal-Gemmæ, and dissolving one of these Salts in the Aqua-Fortis in a Sand-bath over a fire of Digestion.

You may also prepare a Regal water by one single distillation, proceeding thus. Take a pound of good Salt-Peter, and a pound of Sea-Salt well dry'd, and having beaten them to powder, mingle them and put them together in a large Cornute of Potters-Earth daub'd all over with lute; and having plac'd it in a Furnace of close Reverberation, and fitted a large Recipient to the neck of it, make your Distillation with a Gradual fire like as for ordinary Aqua-Fortis's; and you shall find in the Recipient a Regal water proper for the dissolution or Immersive Calcination of Gold.

There is also another Water to be prepar'd, which some call the *Philosophical Water*, or the *Water of the Two Champions*. For which, take two ounces of good Salt-Peter well dry'd, and two ounces of Salt-Armoniac, and having beaten them in a Mortar, and put them together in a large Cornute of Potters-Earth, daub'd over with lute, and plac'd it in a close Furnace of Reverberation, and fitted a large Recipient

ipient to the neck, you may draw forth with a gradual fire a Water which is not inferior to any Regal-water for the dissolution of Gold. In reference to which preparation, it is good to understand, that the largeness of the Retort, and that of the Recipient are as necessary as the government of the fire, because the Spirits that proceed from these four ounces of substance, rise with so much violence, that being forc'd by the fire, they would burst the Retort and the Recipient, if they have not room enough to expand their fury.

The Butter of Niter vitriolated, invented by *Peter John Faber*, being applauded by several Modern Writers, I thought fit to insert it here. Take equal parts of Niter and raw Tartar, and having beaten and mix'd them together in a great iron-Mortar, heated before, set it on fire in a Chimney with a little Coals, leaving the fire and the Niter to act together according to nature; then gather together and put into a Crucible the fix'd Salts of Niter and Tartar, which remain together in the Mortar. Set the Crucible in a proper Furnace in the midst of a Coal-fire, and leave it there till the Salts are become perfectly white; then adding thereto, and mixing the full weight of Salt of Vitriol dissolv'd in Rain-water, reduce them over a small fire to a Curdlement, or a kind of Butter, very white, and keep it in a double glass Bottle well stopp'd. The Author of this Butter highly commends it both inwardly and outwardly, to purge gently melancholy and tartarous humours, being given from one dram to two, in half an ounce of Syrup of Roses or Violets; as also for the cure of the Gout, being apply'd to the part; to dissolve cold and schirrous swellings, to dissipate those that are waterish and flegmatick, and to cure all sorts of Tettars and Scabs.

CHAP. XIX.

Of the Preparation of Allum.

Allum is a salt juice proceeding out of certain Earths, or places that partake of the nature of Lead, and which is compos'd of much flegm, some little acid Spirit, and a good quantity of sharp and corroding Salt, accompanied with several terrestrities. Roch-Allum is the most esteem'd and the most made use of, of all sorts of Allum, and of which there is the greatest quantity. It is also call'd Ice-Allum, because it resembles water congeal'd. There are three sorts of it of which the first is found naturally congeal'd in the Earth. But the other two require art; for the one is drawn forth by boiling and coagulating the Mineral-waters, which are impregnated with it; and the other by making Lyes of Earths and Stones, wherewith it is mix'd Allum, whose colour inclines to red, and is call'd Roman, is accounted the best of all that we meet with in *France*. But neither the Roman nor the rest abound ever whir the more in remedies. For of all Salts, Allum is that whereof the least preparations are made.

Dissolve Allum in Rain-water, and having filter'd the dissolution, evaporate it till it be cover'd with a film, then leaving it to dry, separate and filter the Crystals of the Allum; which some dissolve, filter, and crystallize several times, as well to make them more pure, as the better to qualifie their sharpness. This purification is very advantageous, when you would employ Allum for Gargarisms, or in other inward remedies. But it is never done for outward applications.

Allum is sometimes calcin'd in a Crucible, or in an Earthen-Pot fit to resist the fire, where it becomes white, spongy, and light; at what time, having no need of its Spirit or flegm, you only look after the sharp and corroding Salt, which is the same that is commonly call'd Burnt-Allum. But they that will have all the good parts of Allum, must distil it in a Retort, after the following manner.

Put two or three pound of Roman Allum into a Retort, encompass'd with lute, and having plac'd it in a close Reverberatory, and fitted to its neck a large Recipient, but not luted, begin your distillation with a very soft fire, increasing it sometimes after to the second degree, and so keeping it till all the flegm be distill'd off, and that you perceive the Spirit of Allum enter into the Recipient in white va-

pours. At which time having empty'd and put apart the flegm, and luted the neck of the Recipient to the beak of the Cornute, continue the distillation, augmenting the fire from degree to degree to the utmost violence, and continuing it so till no more vapours come forth into the Cornute. After which, having stopp'd up the Register of the Duomo, and the doors of the Furnace, unluted and given the Vessels time to cool, you shall find in the Recipient the acid Spirit of Allum, and in the Retort the Allum calcin'd, in a white lump, spongy, light, and like to that which is calcin'd in the Crucible; and by this means you preserve all the good parts of the Allum.

The Spirit of Allum is very much recommended against difficulties of Urine; to unstop and clear the passages of Gravel, the Stone, and other matters which stop the course of it. It is very proper to open obstructions of the Liver, the Spleen, and the whole Region of the Bowels; as also to quench the thirst of Fevers, mixing it in proper liquors, from five or six to twelve or fifteen drops. It is also to be mix'd in Gargarisms, to extinguish inflammations that happen in the inner parts of the mouth and throat; to stop the course, and take away the sharpness of thin and tart humours, that fall upon those parts; and to heal the little Ulcers of the Gums, the tongue, and all the neighbouring parts, only by touching them. The flegm is us'd to cleanse and cicatrize Ulcers; and the sediment of the distillation to eat away proud flesh, and excrescencies that are common to Wounds and Ulcers, and to prevent their putrefaction. You may also dulcify the Spirit of Allum, like those of Salt and Niter, mingling with it the same measure of good Spirit of Wine; distilling them together, cohobating them, and proceeding in all things as for the dulcification of the Spirits before mentioned. The Spirit of Allum dulcify'd is yet more proper to give for the inside of the mouth, than that which is not; and you may also double the dose.

Some persons having dissolv'd Roch-Allum in water, and having filter'd the liquor, distill it in a Cinder-bath, till it be dry, in a low glass Cucurbit, cover'd with its head well luted. Then leaving the Vessels to cool, they dissolve in the distill'd water the Allum that remain'd in the Cucurbit, filtering and distilling anew in the same Bath the liquor distill'd to dryness; then they repeat the dissolutions, filtrations, and distillations, till all the terrestrities of the Allum remaining in the filter, all the pure substance be ascended up in distillation. They call this water the Magisterial Spirit of Allum, and they account it one of the best Stipricks that can be prepar'd. We may believe, that the use of this Spirit Magisterial may prove of great advantage, by mixing a tenth part in Gargarisms, or in other liquors or decoctions, which are cooling, astringent, and deterfive, as well for the diseases of the mouth, as for the other exterior parts, which have need of cooling, cleansing, and closing; as also in vulnerary potions, putting in a half part less, according to the proportion of the liquors. So that having this water in a readiness, as at the same time the distill'd waters, decoctions, and juices of the parts of Plants that are proper, you may prepare at any time those remedies, which will be incomparably much better than all the Alluminous waters distill'd, which we find in Books.

Some having put the quantity of calcin'd Allum into a glass Cucurbit plac'd in a Sand-bath, and having pour'd upon it as much good Vinegar as is requisite to dissolve it, filter this dissolution, and having evaporated it in the same Bath, till the film cover it, and leave the Bath to cool; after which they separate, dry, and put up the Crystals, which they find in the Cucurbit. Which is to be giv'n upon occasion in some proper purging liquor, from twelve or fifteen to eighteen or twenty grains, twice a week, a little before the fit, for the cure of Tertian Agues. But I cannot promise the success of a thing doubtful, whereof I have not had the experience.

CHAP. XX.

Of the Preparation of Salt-Ammoniack.

THE name of *Ammoniack*, giv'n to this Salt, has carry'd it at all times from above thirty other names which Authors have giv'n it, the repetition whereof is not necessary. The Temple of *Jupiter Amon*, situated in the midst of the Deserts of *Lybia*, gave it its name; because this Salt was formerly found sublimated upon the superficies of the burnt Sands of that Country.

The Urine of Camels that generally travell'd that way in Caravans; in the pilgrimages that were continually made to this Temple, was the first and principal matter, and the acid Salt of the air, which impregnated this Salt in the night time, by its union stopp'd the volatile parts, which the heat of the Sun had otherwise dissipated. But because we have not at this day the ancient Salt of the Ancients, we must of necessity content our selves with that which is prepar'd at *Venice*, *Antwerp*, and in other places, with five parts of sound Mans Urine, one part of Sea-salt, and a half part of Chimney-soot, which they boil together, and reduce into one Mass, and afterwards sublime in the form as we now see, under the name of that of the Ancients. The impurity of the soot, and the great vent for Salt-Ammoniack, are the reason that it is usually cover'd with dirt, and that to have it in its beauty and purity, you must be forc'd to dissolve it in water, filter it and coagulate it afterwards into a mass, or into Crystals.

Salt-Ammoniack is calcin'd, being mix'd with equal parts of Quicklime, in a Crucible plac'd upon the iron-square in the midst of a Wind-Furnace, where it is at length forc'd into Fusion, then it is dissolv'd in water, and having filter'd and coagulated the dissolution, it is left to dissolve by little and little in a Cellar, in a liquor fit to dissolve Gold or Silver.

You may sublime Salt-Ammoniack in a Sand-bath with a gradual fire, having mix'd it with equal parts of Sea-salt. You may also very properly sublime it by the same fire, having incorporated it with its weight of Steel-filings, or else with equal parts of those little scales of Iron, which are to be gather'd up under Smiths Anvils, and force the flowers of it to ascend, which are highly commended in *Quartan Agues*, giving them at the beginning of the fit, from five or six grains to a scruple, in Wine or in some other liquor, having us'd purgative or emetick remedies before.

You may also sublime the flowers of Salt-Ammoniack, mixing them with equal parts of Salt-Tartar, or Blood-stone. But because the Salt-Ammoniack principally contains in its composition much of volatile urinous Salt, and one part of Sea-Salt, part acid, part fix'd, and that you may by raising these flowers save two different Spirits, the one urinous, and the other acid, which the same Salt encloses in its substance, I refer the preparation thereof to the next Chapter.

CHAP. XXI.

Of the Distillation of the Urinous Spirit of Salt-Ammoniack.

THE volatile Salt of the Urine, added to that of the Soore, predominating in quantity over that of the Sea-Salt, in the Composition of Salt-Ammoniack, and the latter not being able to render the other capable of resisting the fire, though it have the power for some time to conceal its Urinous odor, and to make it appear fix'd while you do not expose it to the violence of the fire, we are constrain'd to reinforce the Sea-Salt with some other fix'd Salt, when we would distil it, or cause the volatile part alone to ascend in Flowers, otherwise the volatile Salt in sublimating it self would raise with it all the Sea-Salt, and would cause it to participate of its volatile nature: Therefore to make the volatile part of the Urine to ascend either in Spirit, or in Flowers, and to stop at the bottom of the Vessel the fix'd and Acid parts of the Sea-Salt, you must observe this Method.

Take a pound of Salt-Ammoniack, and one pound of Salt of Tartar, or if you please, four pound of good Ashes of Oak'n wood that never floated in the water, and having beaten them in a Morter, and put them into a Cucurbit somewhat large, and plac'd the Cucurbit in a Sand-bath, sprinkle the mixture with half a pint of water; then having carefully cover'd the Cucurbit with its head, and luted the closures diligently with Paper and Amydon, or with a wet bladder; and having fitted and luted a small Recipient to the beak of the head, kindle under the Bath a moderate Coal-fire, and continue it five or six hours; or till all the volatile Spirit of the Salt-Ammoniack be distill'd into the Recipient, and that all the Flowers be sublimated part, in the head, and part upon the sides of the Cucurbit, above the substances. After which, leaving the Vessels to cool, you shall find a volatile Spirit in the Recipient, very subtle, the penetration whereof neither the eyes nor nose will endure, which you must put up in a double Glass-bottle, perfectly well stopp'd, putting up at the same time the Flowers in the head, and those in the Cucurbit, into a double glass bottle as well clos'd. I would have you cover the Cucurbit speedily with its head, as soon as you have sprinkl'd the substances with water, because that the great inclination that the Salt of Tartar, and the acid of the Sea-Salt have to unite together, causes them immediately to act reciprocally one upon another, especially when you put the water in, which dissolving the Salts, causes them to act and react with more speed, then they could do before they are dissolv'd. Which is the reason that the volatile Salt of Urine, which makes up the composition of Salt-Ammoniack, finding it self disingag'd from the bonds of the Sea-Salt, rises, and discovers it self by its penetrating odor, ascending partly in the form of a Spirit, which is indeed no more then the volatile Salt dissolv'd in the water with which the Salts were sprinkl'd; and partly in Flowers, forc'd out by the fire, and made to rise into the head, or to stick to the upper sides of the Cucurbit.

The volatile Spirit of Salt Ammoniack given from half a scruple to half a dram, and sometimes to a dram in proper Liquors, is a powerful sudorifick. For which reason it is adminster'd with good success in the cure of malignant Fevers; and all Maladies that require the provoking of Sweat; as also in Venereal Distempers, especially where Mercury has been given out of season, or in two great quantity. For this Spirit drives and forces out through the Pores of Skin, the Mercury that was stopp'd in the solid parts of the body. It gives quick and sensible relief in Apoplexies, Epilepsies, Lethargies, and in the most part of other distempers of the head; as well taken inwardly as held to the Nostrils. For it opens, penetrates, cuts and subtilizes thick and viscous matters, and dissolves and dissipates all sorts of Vapours that rise from the lower parts, and which filling the ventricles of the Brain, cause Vertigoes and other troublesome accidents which interrupt the necessary course of the Spirits, and the functions of all the parts. For which reason it is very proper in swooning fits, weakness and Palpitations of the heart, and particularly to suppress

suppress and dissipate vapours that rise from the Matrix. It powerfully resists putrefaction, kills worms, opens the obstructions of all the intestines, and above all the passages of the Urine, provided you mix it with some fix'd Salts or Acids, which may reiculate its operation to the parts. It is also of great advantage in Scorbatic distempers, because of the vertues which it has to purify the mass of the blood and to facilitate its circulation. It may be mix'd with divers distill'd waters as well simple as compound; with Tinctures, Syrups, Extracts, Confections, and other preparations as well Galenic as Chymical; the dose being from a scruple to two, in seven or eight ounces of Liquor, and mixing the whole, taking it by intervals between meals, one or two Spoonfuls at a time, and continuing the use of it in long diseases or such as are subject to return.

The volatile Spirit of Salt-Ammoniack being nothing else but the most volatile part or Flowers of the same Salt, dissolv'd in some portion of Flegm, we must attribute the same vertues to the Flowers, provided you keep them in some double Glass bottle well stopp'd. Their dose must be something less, because they want that moisture which accompanies the volatile Spirit.

As some are of opinion, you may mix with the Salt-Ammoniack three times as much Quick-lime in powder. But you must not have any more, for if you would afterwards draw forth the acid Spirit of the Sea-Salt, it could not be done. For the fix'd Salt, and Acid and Terrestrial part of the Quick-lime, predominating over the acid of the Sea-Salt, would hinder the same Salt from yeilding it's acid Spirits, which the Salt of Tartar does not hinder at all. We cannot also but believe, that the Quick-lime mix'd among the Salt-Ammoniack, when you intend to draw forth the volatile Spirit or the Flowers, breaks the force of the Sea-Salt Marine, which makes up a part of the Composition of the Salt-Ammoniack; whereas on the other side, the fix'd Salts fortify it, and preserve to it both its nature and its qualities; considering that the Salt Marine, though for a time capable to stop the volatile part of the Salt-Ammoniack, as well when it is in preparation, as after it is prepar'd, provided you leave it in its own condition, cannot however detain it, nor subist it self when they are both expos'd together to the violence of the fire. For then the volatile part of the Salt-Ammoniack does violence to the acid, and carries it up with it, so far is the acid from stopping that, or it self either. I say it is not then able to resist the force of the volatile forc'd by the fire, at least if it be not reinforce'd by some fix'd Salt, which predominating in quantity over the volatile part of the Salt-Ammoniack, which surmounted the Salt Marine, may give a Counterpoise to the latter, and prevent the volatile from rising in sublimation, or in distillation. For we must believe, that in the great inclination which the acid part of the Salt Marine has to unite it self to the fix'd Salts rather then to the volatiles, the fix'd Salts uniting themselves with it, stop it and preserve it intire, and prevent the volatile part of the Salt-Ammoniack from rising, as it would do, if its parts were not strongly engag'd in their Pores. For if the fix'd Salts which you may here add, did break the force of the Salt Marine, it would not be in a condition after that to afford its acid Sprit as it does, when having been united with the Salt of Tartar, it has been disingag'd from the volatile Salt. And if it were powerful enough without the help of this fix'd Salt, it would not suffer it self to be rais'd by the volatile part, as does befall it being alone, as will be found to be true upon tryal.

And though that the mixture of one fix'd Salt with Salt-Ammoniack stops and fortifies the acid and fix'd parts of the Salt-Marine, letting the Urinous volatile part escape, and disposing it to rise in Spirit or in Flowers, their manner of action is however very slow and very feeble, unless you pour some Liquor upon these Salts after you have mix'd them, and that this liquor dissolving in part the acid of the Sea-Salt, and the new fix'd Salt, they obtain the means to exercise their action reciprocally one upon another, and to make together one particular body; while the volatile Urinous Salt resumes its first nature, and that the acid and fix'd Salt stopping themselves at the bottom, and not depriving the first of its natural liberty, it raises and discovers it self to the nose and eyes of them that are near it.

But though the addition of the water be very advantageous for the distillation of the urinous Spirit, and for the sublimation of the Flowers of Salt-Ammoniack, because that in dissolving the Salts, it facilitates the conjunction of the acid of the Salt Marine to the fix'd Salts, and that it gives way to a greater separation of the volatile Salt parts from the fix'd; we must not however conclude from thence, that we cannot cause a volatile Urinous Spirit to ascend from these Salts mix'd together
without

without the addition of any moisture, or that we cannot cause a good quantity of the Flowers to sublime, provided you leave empty about three fourths of the Cucurbit, that you carefully lute the vessels, and that you govern your fire so, that you do not hasten too much the distillation of the Spirit, nor the sublimation of the Flowers. For these Salts having usually receiv'd from the air some certain moisture sufficient to dissolve and unite some part of the acid to the fix'd Salt, the same moisture finding it self afterwards forc'd by the fire, and constrain'd to rise in vapours, dissolves also, and carries with it some part of the Urinous volatile Salt, by forsaking the fix'd, whence it comes to pass that afterwards it distils in Liquor into the Recipient. While notwithstanding the defect of moisture, the union of most part of the acid with the fix'd Salt, hinders it not from so doing by little and little, though much more slowly and with less perfection, and that it give way to the separation and sublimation of the Flowers of a good part of the volatile Salt.

CHAP. XXII.

Of the Distillation of the Acid Spirit of Salt-Ammoniack.

THE acid Spirit of the Salt-Ammoniack proceeding only from the acid of the Sea-Salt, and the quantity of the latter being much less in the composition of the same Salt-Ammoniack, then that of the volatile Urinous, we cannot separate this Spirit from the other substances, while the volatile Salt is mix'd with it. And therefore you must begin to distil that first, and not undertake that of the acid Spirit till the volatile has made way.

Take the mass which remains in the Cucurbit after the Distillation of the volatile Spirit, and having reduc'd it to powder, and mix'd it with four times as much of common Bole, powder'd in the same manner, put them into a Cornute, and having plac'd it in a close Reverberatory, and fitted and luted a large Recipient to the neck, draw forth the acid Spirit with a gradual fire: but you may take another course, and thereby preparing a good Urinous Spirit of Salt, and saving all the good parts of the substances mix'd together, gain at length an acid Spirit.

To which purpose having powder'd two pound of Salt-Ammoniack, and as much Blood-stone, and having mix'd them, and put them together, into a large Glas Cucurbit, place it in a Sand-bath; and cover'd it with its head, fitted a recipient to the head, and perfectly well luted all the closures of the Vessels, kindle under the Bath a very soft fire at once; which you must encrease a little and a little by degrees, and at length to the utmost violence, continuing it so for five or six hours. Then leaving the Vessels to cool you shall find in the Recipient, the odor whereof will be very penetrating, which is to be put up in a double glass bottle perfectly well luted: and in the head and upon the sides of the Cucurbit above the substances you shall find the Flowers of Salt-Ammoniack of a yellow colour, which you may keep as they are, if you please in a double glass-bottle well stopp'd. But you may make a better advantage of them, if after you have powder'd them very finely, and put them into a Matraſs, you extract the tincture with good Spirit of Wine by the most gentle ordinary ways: and if after you have filter'd all the Tinctures, you draw forth the Spirit in *Balneo Maria* to the dryness of the Salt, which will be much more beautiful then the Flowers, and will have the colour and Aromatick odor of Saffron. You may also keep it in that condition, or dissolve it into a Cellar in a Golden Liquor, which may be giv'n from five or six drops, to ten or twelve, in proper Liquors, against all manner of obstructions, particular those of the Hypochondria. But for as much as the acid part of the Salt-Ammoniack remains at the bottom of the Cucurbit, among the settlement of the Blood-stone. After you have powder'd and mix'd the whole with four times as much Potters-Earth dry'd and powder'd in the same manner put the whole into a large Retort of Earth, encompass'd with

with lute, and having plac'd it in a close Furnace of Reverberation, make your distillation with a Gradual fire, proceeding in all things as for the distillation of the same Spirits: and you shall have an acid yellow Spirit, much more pleasing and much more proper for all uses, then that which is drawn from the Salt-Marine. You may also prepare a Urinous Spirit, Flowers, and an acid Spirit of Salt-Ammoniack impregnated with the impressions of the acid, proceeding as follows.

Having powder'd and mix'd two pound of Salt-Ammoniack, and as much filings of Steel, put them together into a large Cucurbit, plac'd in a Sand-bath, and having cover'd it with its head, fitted a Recipient to the pipe of the head, and carefully luted all the closures, kindle and keep for some time a very soft fire under the Bath; but increase it by little and little, and by degrees to its utmost violence, and having proceeded in all things as for the distillation and sublimation of this Salt with the Blood-stone, put up apart the Urinous Spirit in a glass-Bottle perfectly well stop'd; then having scrap'd together the Flowers in the head and from the sides of the Cucurbit, of a brown colour; bruise and mix the remainder with the Flowers, and put all together into a convenient vessel; expose it night and day in the air for some weeks, and you shall perceive by little and little a kind of a Flower to rise above the substances, and how that by moistning themselves, swelling and raising themselves, they will become soft, and of an ashy colour enclining to yellow, having then a sharp eager vitrioliz'd favor, near to that of Mars or Iron a little Sweetish. At which time having put the whole into a Retort of Pottery-Earth, daub'd over with Lute with a long neck, place it in a close Furnace of Reverberation, and having fitted to it a large Recipient, and carefully luted all the closures, make your Distillation over an open fire, soft at the beginning, but augmented by degrees to the utmost heat it can give, and continue it in the same manner as for the last Distillation of the Blood-stone. By this means you shall have an acid Spirit, of a Gold'n colour, which may be rectifi'd over a soft fire, to separate the watry part, with which it is more impregnated then the preceding Spirit, because of the moisture of the air which is mix'd therewith.

This Spirit is highly recommended to open all obstructions of the lower Belly, to break and expel the Stone, to assuage the pains of the Intestines; strengthenning them, as well as the stomach, the Liver, and the Spleen. The dose is from five or six to ten or twelve drops in proper Liquors.

You may instead of mixing the Flowers with the Mass that remains after distillation, mingle them with half their weight in new Salt-Ammoniack, and having put the whole over a Sand-Bath in a Cucurbit of glass cover'd with its head, carefully luted and fitted a Recipient to it luted in the same manner, sublimate them in yellow Flowers, and draw forth by the same means a small quantity of Spirit, participating of Acid and Urinous, and employ them for the same uses, as the Spirits before mention'd.

The different qualities of the Urinous Spirit, and the acid Spirit drawn from Salt-Ammoniack, may surprize those who seeing this Salt, should not know its Composition, nor the nature of the Salts which compose it. Many also may wonder to see these two Spirits converted into one Salt compos'd of both, and that clear Liquors, such as these Spirits are, should take the body, shape and favor of Salt, without the addition of any strange matter which may be active or assisting in this Corporification. The tryal however which may be made of these things, will easily stop the mouths of those who doubt of it; especially when they shall have seen, that by putting into a Cucurbit the acid Spirit of Salt-Ammoniack, and by pouring upon it by degrees, and at several Repetitions the Urinous Spirit of the same Salt; or else by putting in the same vessel the Urinous Spirit, and pouring upon it the same acid Spirit, till Ebullition cease, the two Spirits united together, as having reciprocally penetrated each other, shall be found not only to have lost their favour and odour which they had particularly by themselves before their conjunction, but if you keep the Cucurbit which contains them, for some time upon a Bath of Ashes or Sand, over a moderate heat, you shall see that the insipid flegm which was mingl'd among them, dissipating it self, they will assume the body, shape, and all the qualities of Salt, without destroying each other, and that they will be in a condition also both of them their particular substance of a Spirit, when the Artist has a mind to separate them by the means of some fix'd Salt.

CHAP. XXIII.

Of the Preparation of Vitriol.

Vitriol has been always rank'd among the Salts, though some have thought it very different from their nature, and have taken it for a Salt altogether particular, compos'd of an acid Spirit, very much resembling that of Sulphur; and of some particles of Iron or Copper, or some other Metal or Metallick matter, in part terrestrial, which the same Spirit has met withal, and dissolv'd in the Bowels of the Earth, and with which it is incorporated in form of a Salt. The variety of the colour and substance of Vitriols, and the parts which compose them, has much contributed to this opinion; because that though we find some Vitriols, and particularly the white, which contain no apparent Metal or Metallick matter, the most part however of the rest have in them particles of Iron or Copper, and sometimes both together. Whence it falls out, that when there is no intention but to open the passages by fortifying the parts, those Vitriols are made choice of that have no Iron; but principally those which contain much Copper, when their Emetick virtue is requir'd, accommodating them to the effects which you desire, with regard to the substances which compose them.

All the Vitriols have been much us'd both in the one and the other Pharmacy. Some Authors also who have aspir'd to a universal remedy, have thought that it was conceal'd in Vitriol, and that the word *Vitriolum*, containing in it something of Mysteries, every one of the Letters signifying a word, which they thus expounded, *Vitificando Interiora Terræ, Rectificando Invenies Occulum Lapidem, Veram Medicinam*; by searching the Bowels of the Earth, by rectification thou shalt find the Occult Stone, which is the true Physick. But all these imaginations, nor all they can say of it, not being able to change the nature of the Vitriol, and the colour and place where it is bred, causing for the most part the differences, and demonstrating the various composition, and different qualities; I shall only say, that the blew colour, as well in Salts as waters, being an essential mark of the mixture of Copper among the other substances, we are not to doubt but that the blew Vitriol, being that of Cyprus, is that of all the rest which participates most of that Metal; that the green colour, being compos'd of blew and yellow, and the deepest green being most charg'd with blew, the greenest Vitriol participates more of Copper than that which is less green; whose pale colour enclining to yellow or earthy, denotes nothing else but the earthy or ferruginous matter which is incorporated with it. It may be also said, that the white Vitriol is that which is less mix'd with Metallick substances. As for the red colour, which is natural to certain Vitriols, which the Philosophers have describ'd under the names of *Seri*, *Chalcitis*, and *Atis*, it is only to be attributed to the subterranean heat, which has given them that colour, which the ordinary fire gives to Vitriols that are expos'd to it.

Vitriol is variously prepar'd according to the various intentions of the Artist. The purifying of it is the most common of all its preparations; though it be not always necessary, but to separate the terrestreities, and to have the Crystals transparent, or to mix with other internal preparations. To which purpose it is enough sometimes to dissolve the Vitriol in common water, to filter and crystallize it, as is done to all other Salts. But when you would perfectly purify it, and separate very much of the terrestrial parts, as also of the Metallick particles which are inwardly and deeply mix'd with it, and which may be apt to pass through the filter, we are oblig'd to have recourse to long digestions, by means whereof the terrestreities and Metallick parts precipitate to the bottom of the liquor, whereby the Crystals afterwards are much fairer in colour, and more transparent than the Vitriol before it was purify'd. Some to save expence of time, pour upon the dissolution of Vitriol some new acid, among the rest the liquor of Niter or Vinegar distill'd, which uniting it self with the fix'd Salt-part of the Vitriol, cause it to abandon the terrestrial or Metallick parts, which it has dissolv'd, whence follows their precipitation to the bottom of the liquor. But these means are not to be us'd but upon certain occasions, where the mixture of these new acids is not contrary

to the effects, which you expect from the Vitriol or its parts; or where their mixture may be necessary, as you may observe by the following water.

CHAP. XXIII.

The Stiptick water of Monsieur Matte La Faveur Distiller in Montpellier.

Dissolve twenty five pound of Vitriol in a sufficient quantity of Common water, and having strain'd this Dissolution through a course Linnen-Cloth, put it over the fire in a Copper Caldron, where after it has boil'd some few bubblings take off the Vessel from the fire, and pour immediately upon the Liquor, a pint of Spirit of Vinegar, to cause the Terrestrial part of the Vitriol, improperly call'd Sulphur, to precipitate to the bottom of the vessel; then leaving the Liquor for ten or twelve hours to settle, and to give the Earth time to sink to one place, pour out by inclination the Liquor that swims at the top: and having well wash'd, dulcify'd, and dry'd the powder resting at the bottom, over hot Embers, put eight ounces of it into a glass Cornute, and having pour'd upon it eight ounces of Spirit of Vitriol well purify'd from its Elegm, make your Distillation with a gradual fire, soft at the beginning, and at length very violent, continuing it so till nothing come out of the Cornute. Then give the Vessels time to cool, break the Retort, beat the Mass that remains to powder, and put it into a Matrafs, upon which having pour'd Spirit of Wine rectify'd with Salt of Tartar, about five or six fingers breadth above the substances, cover the Matrafs with a Vessel of Rencontre carefully luted, and set it upon a Bath of digestion for four and twenty hours. After which the Spirit of wine being become very red, filter it hot through a course Paper, then drawing it off again through a glass Alembick, or gently evaporating it to the driness of the sediment, you shall find at the bottom a whitish powder, upon an ounce whereof having pour'd four ounces of Rain-water, leave the mixture in the Sun for some days, then Filter the Liquor, which will be a Stiptick water proper to stop all sorts of bleedings.

I have inserted this water among the preparations of Vitriol by the order of *Monsieur D'Aquin*, chief Physician to his Majesty, who having discover'd the Author, who prepar'd it in his presence, for which the Doctor has testify'd his acknowledgment by obtaining several favours of the King in his behalf. The said *Monsieur Faveur*, has prepar'd another Stiptick water which has the same vertue with the preceeding, though somewhat different from it, proceeding after the following Method.

Boil seven or eight pound of Vitriol of *Piza*, in sixteen pints of water, and when the Vitriol is dissolv'd, take it off the fire and pour upon it half a pint of Spirit of Vinegar; let the matters settle, and pour out the Liquor by inclination; wash, dulcify, and dry the powder which was precipitated to the bottom. Then having put it into a Retort luted only in the under-part, and pour'd upon it double its weight in Spirit of Vitriol well rectify'd, make the Distillation over a naked fire, but moderate, till the substances be dry, which will be then of a Greyish colour. Then break the Retort, powder the Mass and put it into a Crucible over burning Coals, stirring it continually with an Iron Spatula, till it turn yellowish. At which time having pour'd it into a Mortar and well beaten it, put two ounces into a Matrafs, with three ounces of ordinary water, and after a digestion of half an hour, filter the Liquor through a coarse paper, and keep it in a double glass bottle well stopp'd as a remedy against all Hemorrhagias or violent fluxes of blood.

CHAP. XXIV.

Of Precipitates, Earths, or Sulphurs of Vitriol.

THE purifying of Vitriol by the means of long and reiterated digestions, made in common water, and the preparation of Stiptick water, already describ'd, are examples of the precipitation of most of the terrestrial parts of the Vitriol. But we may by other means make a precipitation, and a much more absolute separation of the solid parts which the acid Spirit of Vitriol had dissolv'd, which some call simply Earth, others Metallick Earth, or Sulphur of Vitriol.

Some having made choice of a green and crystalline Vitriol, dissolve it in hot Rain-water, and having filter'd the whole, they pour upon it by little and little the liquor of Tartar, or the Lye of Wine-Lee's Ashes, till ebullition cease, to the end the acid of the Vitriol, and the fix'd Salt of the Tartar, or of the Wine-Lees, acting reciprocally the one upon the other, and uniting together, the first may be compell'd to forsake the matter which they have dissolv'd, and to permit it to precipitate to the bottom in form of an Earth, which is to be wash'd in several waters and dry'd, after you have pour'd out the liquor that swims uppermost by inclination, and put it up apart by itself.

This Earth is call'd *Sweet Sulphur of Vitriol*, though very improperly, since that in reality it is only a Metallick Earth, principally recommended to cure diseases of the Lungs, and to cleanse and cicatrize Wounds and Ulcers, as, also to kill Worms.

Neither is the liquor that swims above the precipitated Earth pour'd out by inclination, as if it were good for little, since it contains in it the most pure acid and salt part of the Vitriol, united with the fix'd salt part of the Tartar, or of the ashes of Wine-Lees; and a very good medicine may be made of this liquor after precipitation of the Earth of Vitriol with the liquor of Tartar. For by this means the terrestrial part naturally conceal'd in the Salt of Tartar, precipitates with that of the Vitriol; so that by the conjunction of the acid part of the Vitriol with the fix'd Salt of the Tartar, and by the evaporation of the water made use of, you shall find at the bottom of the Vessel, a pure and crystalline Salt, compos'd of two Salts, the effects whereof are different from the ordinary sorts of Vitriol, which are Emetic, whereas this works generally by stool, and rarely provokes vomiting; the dose being from half a dram to a whole dram; besides that it is recommended against intermitting Fevers, especially when there is an occasion to purge melancholy.

You may very properly use Vitriol of Mars, instead of common Vitriol; and having dissolv'd it in distill'd Rain-water, or in flegm of Vitriol, and digested it in a Matraass for some time, filter the liquor. Then precipitate it with the liquor of Tartar; separate, wash, and dry the precipitated Earth; and having evaporated the moisture of the Salts, and crystalliz'd them together, keep them for your occasions. For the astringent of Mars, or Iron, still better correcting the vomitive quality of the Vitriol, renders this Salt in a condition only to act by stool or urine.

Some there are that having put into a Cucurbit one part of the filings of Steel, and two parts of excellent Vitriol, pour upon them distill'd Vinegar, two or three fingers above the substances; then placing the Cucurbit in a Sand-bath, they evaporate the moisture till the substances prove dry, and also till they look red. Then leaving the Vessels to cool, powder'd and put the mass into a new Cucurbit, they pour more distill'd Vinegar upon it, four or five fingers above the substance; which done, having digested the whole till the Vinegar look red, they filter this tincture, and precipitate it with the liquor of Tartar, expecting to have by this means a true Sulphur of Tartar.

Others thinking to do better, after they have dissolv'd Vitriol of Mars, or common Vitriol in Water, they sprinkle the filings of Steel, and having dry'd it in a Sand-

Sand-bath, and continue this sprinkling and drying of the Steel-dust, till it be become very red. Having after that powder'd the Mass, they extract a Tincture with distill'd Vinegar; they filter, it, and precipitate it with Liquor of Tartar, in expectation of a Sulphur of Vitriol, which they have entitl'd *Anodyne*, and would have it to be a second *Landanum*; but no wonder the Effects do not answer their promises, since all this pretended Sulphur, is nothing else but a Metallick Earth.

C H A P. XXV.

Of the Distillation of Vitriol.

They that contemplate one part of the substances which they may extract by the Distillation of Vitriol who only look after the first and second Spirit, and unwilling to spend time, are not diligent to seek for all that force and penetration which they might meet with in the Distillation, use no other but *English* Vitriol, which participating more of Iron than of Copper, and having less fix'd Salt then most of the other Vitriols, consists of less compacted parts, and affords its Spirit in greater quantity and with less trouble. However it is not to be thought, for all that, that the *English* Vitriol is without some particles of Copper, as some have written. For if it were, the Mars would shew it self by its brown colour which would predominate. Whereas the red colour, which appears very suddenly in this Vitriol, as also in the rest; except the white, when they are expos'd to the violence of the fire, is an undeniable sign of the Copper that lyes conceal'd in it; as also the red colour, which happens to the Verdigreese being upon the fire, is also an assur'd mark that it contains in it several particles of Copper. But though the dearth and the abundance of the particles of Copper which the Vitriol of *Cyprus* contains, of which the blew colour is a certain evidence, be the reason that it is not so much us'd for the extraction of its Spirit; however most sure it is, that *Angelus Sala*, *Schroderus* and several other Writers, recommend a meaner Vitriol for Distillation, and which contains more particles of Copper. And we see by experience that the Vitriol of *Germany* in fair green Crystals, and by consequence more full of the mixture of Copper then that of *England*, is that whose Spirits are more powerful, and which affords them in greater quantity. Whence it happens that we seldom distil that of *England*, but when the Astriktion of the Mars is requir'd, rather then the penetration of the Spirit.

But to obtain all the good parts of the Vitriol: After you have made choice of that which you judg most proper for your purpose, fill up with it, about the half of a glass Cucurbit somewhat low, plac'd in *Balneo Maria*, and having cover'd it with its head, fitted a Recipient to the pipe, and carefully luted the closures, cause the Bath to boil without intermission, till nothing more distil into the Recipient. Then let the Vessels cool, and having unluted the Recipient, put up the distill'd water in a Bottle close stopp'd. Which water Writers call the *Dew of Vitriol*; principally recommending it against Distempers of the head, and to strength'n the Bowels, as also to restore and preserve the Radical moisture; giving the weight of two Drams, especially in the Spring and after Purgation.

At the same time take the Cucurbit out of the *Balneum Maria*; and having plac'd it in a Sand-bath, and reluted the closures of the Recipient, draw off by a stronger heat, then that of a boiling Bath, all the water that will come forth; which will prove clear, of a pleasing scent, and deserves to be kept apart, as being proper to cleanse the Reins, open the passages of the Urine, and heal internal Corrosions, giving the weight of a dram in meat-Broth. It cools the Inflammations of Wounds, asswages the pain, and cicatrizes them being apply'd. It is also very good to cure the scurfe.

Having sav'd these two Waters and let the Sand-bath cool, beat the Mass that remains in the Cucurbit to powder, and having fill'd therewith two thirds of an Earthen Retort, daub'd over with Lute, set in a close Furnace of Reverberation; and having fitted and luted a large Recipient to the pipe, begin your distillation with

with a gradual fire, soft at first, but increas'd by degrees from time to time, and forc'd at length to the utmost violence; continuing it so, till no more vapours come forth of the Retort, but that the Recipient appear altogether clear. At which time the Vessels being cool and the Recipient unluted, pour out the distill'd Liquor into a double glass Bottle, and having well stopp'd it keep this Spirit for your occasions. Or else, pour it forth into a Glass Cucurbit, cover'd with its head, and having plac'd it in a Sand-bath, fitted a Recipient to the Nozel, and carefully luted all the closures, you shall draw forth in the first place a very subtle penetrating Sulphury Spirit, which you must keep apart in double glass bottles very close stopp'd. Then continuing the fire, the Flegm will rise and distil; after that a Spirit indifferently Acid, and at the bottom of the Cucurbit you shall find the more weighty Spirits, and most tart, which they call improperly Oil of Vitriol.

Vitriol yields its Spirits in white Clouds as all other Salts except Niter, whose vapours are red; but the compactness of its parts are the reason why the Spirits come forth so slowly: for you are forc'd to continue the fire for three or four natural days, and sometimes also longer, especially for the Distillation of German Vitriol, when you would have the last Spirits. And if you will continue the fire till you can see cross the Recipient the mouth of the Retort red, it is a sign that nothing more comes out of the Retort, and that the vapours are all dissolv'd into Liquor in the Recipient. But because these last Spirits are extremely corrosive, and impregnated with Metallick substances, contain'd in the Vitriol, you may cease the Distillation, twelve hours after the white vapours begin to appear, or when you perceive certain dusky drops about the neck of the Recipient. Which hinders not, but that having unluted the Recipient, by moistning the Lute of the closures with hot water, and put up the Spirit safe, you may put on again and relute the little Globe, or Balloon, and continue the Distillation with a very violent fire, till the Vitriol has yielded its utmost Spirits.

The first Spirit of Vitriol, not being so Corrosive as the latter, is more proper to take inwardly; it is Diuretick, and somewhat Diaphoretick: it cuts, attenuates, and resists the putrefaction of the humours. It stirr's up an appetite; it opens the obstructions of the Liver, Spleen and Mesentery, it qualifies the heat of Fevers mix'd in drink from four or five, to twelve or fifteen drops; or till the Liquor be pleasingly sharp: it heals the Ulcers of the tongue, and the inside of the mouth, being touch'd with it: it is very proper to cure all diseases of the Skin that proceed from Salt Flegm.

The Metallick Earth or Oaker, wherewith Vitriol abounds, hindring its Fusion when the fire has consum'd its greatest moisture; and this consumption being effected before the Vitriol is put into the Retort, we never mix with it those dry and acid substances which are usually mix'd with other Salts to prevent their Fusion, when we intend to extract their Spirits, but we put it alone thus dry'd into the Cornue. The Earth it self wherewith it abounds, makes it fit to hinder the separation and Fusion of the Niter, with which we mix it for the preparation of Aqua-Fortis.

Some Authors having put the Vitriol into a Glass Cucurbit plac'd in a Cinder-Bath, cover'd it with its head, and having well luted the Closures, and fitted a Recipient to the Pipe, with a moderate heat they draw off the Flegm and acid Spirit, as much as they can force to ascend from it; then having cohobated the distill'd Liquor upon the sediment, and repeated Distillation and Cohobation seven or eight times, and redoubl'd the heat in the last distillation, they at length draw forth a Flegm mix'd with much Acid Spirit, whose odor becomes very grateful, if circulated two or three days in a proper Vessel, very well stopp'd, and plac'd in a Sand-bath; over a fire of digestion.

This Acid Flegm, as also the volatile Spirit of Vitriol, is very much recommended to dissipate pains in the head, and to cure the Epilepsy. There is no better way to limit the dose then by ordering it, till the sharpness be pleasing to the Palate, in those Liquors wherewith it is mix'd. All the Spirits of Vitriol are good to kill Worms; and particularly to stop internal fluxes of blood, and to cool the inflammations of the Eyes.

CHAP.

CHAP. XXVI.

Of the Spirit of sweet Vitriol and some other Spirits of Vitriol.

SOME Writers direct you to pour Spirit of Vinegar upon calcin'd Vitriol, about four fingers above it, and to let them digest together for some days, then to pour out the Liquor that swims at the top by Inclination, and to keep it apart: after that to pour fresh Spirit of Vinegar upon the sediment, and repeat digestion during the same time as before, having pour'd out the liquor by Inclination to preserve it as the first, reiterating the same Operations seven or eight times. This done, they order you to put all the Tinctures into a glass-Cucurbit, plac'd in a Cinder-Bath, cover'd with its head, and to draw off the Flegm of the Vinegar, and that of the Vitriol, with a soft fire, till the sediment of the Tinctures come to be as thick as the consistence of Honey; and having afterwards mix'd it with some handfuls of Sand, or with some other such like matter, to put the mixture into a Cornute, or Retort, and with a Gradual fire to draw forth a Spirit of Vitriol which they call *Dulcify'd*. But besides that this Spirit is not free from Acidity, they cannot call it a true Spirit of Vitriol being rather a Spirit of Vinegar.

Others having digested the Spirit of Vitriol upon filings of Steel, ponder'd Coral, or some such kind of substances, upon which the Spirit of Vitriol may expend its Acrimony; or else having singly mix'd the Spirit of Vitriol with the same matters they by the usual ways draw forth a Spirit, which is not so tart, as being depriv'd of the most acid parts which those substances have suckt up. But this Spirit cannot be accounted otherwise then imperfect, since it has lost the most part of its good parts. I also think it is to be rejected, as likewise the first, and that the best dulcifying of the Spirit of Vitriol, is to observe the same method as for the dulcifying the Spirits of Salt and Niter; by mixing it with equal parts of Spirit of Wine well rectify'd, and distilling the mixture in a glass-Alembick in a Cinder-Bath with a moderate heat. For by the inward Union which by that means is made of the acid part of the Spirit of Vitriol, with the volatile Sulphury Salt part of the Spirit of Wine, where arises a Spirit much more sweet in favour, and gentle in all its effects, then was the Spirit of Vitriol before its Conjunction. And though we must confess that this Spirit is compos'd of two, nevertheless we must have a heter opinion of it, because they unite without the destruction of each other, and that by this new disposal of their parts by this Union, that which both of them had of violent is qualify'd, and their joint Operation much more proper and fitted to our nature. So that the use of this Spirit is of much more advantage, then that of the ordinary Spirit, especially to those persons to whom acids are injurious; and that it is much more proper for several diseases, chiefly the Scurvy. For the Spirit of Wine imparts to the Spirit of Vitriol a Diaphoretick vertue, yet does not deprive it of the quality it has to open obstructions, and strengthen the parts. This Spirit may be tak'n in a larger dose then that which is not Dulcify'd.

You may also extract from the *Dead Head* that remains after Distillation an acid Spirit much less violent, then that which is drawn from Vitriol after the ordinary manner, by laying it in a place where it may receive the beams of the Sun, the influences of the Moon and other Stars, with the moisture of the air, so that no Rain may fall upon it, and leaving it there, for several months or which is better for a whole year. For by this means the dry earth of the Vitriol, being depriv'd of its natural Salt, but not of its Ferment, will be impregnated with the acid Salt of the air, and become in some sort a new kind of Vitriol, whence you may draw by the ordinary ways, and in ten or twelve hours time an acid Spirit, very pleasing, which some call Spirit of Vitriol *Regenerate*, which you may safely make use of, and with success in all diseases, for which the ordinary Spirit of Vitriol is prescrib'd, giving in the same dose and in the same Liquors.

There is also a Compound Spirit of Vitriol to be prepar'd, after the following Method. Beat in a Mortar, and mix four pound of Vitriol calcin'd to redness, with five pound of River-Flints calcin'd, and a pound of Salt of Tartar calcin'd to white

whiteness, and put them all together into a Retort, and having set it in a close Furnace of Reverberation; begin your Distillation after the ordinary manner with a Gradual fire, till the Flegm and all the Spirits are come forth. After which having cool'd the Vessels, and unluted the Recipient, mix the Liquor with that which remains in the Retort, and reiterate Distillation, the better to loos'n the parts which are to ascend in distilling. To which purpose repeat the same operations two or three times over; and then you shall have a Spirit, which some Authors esteem very much to open the obstructions of the Liver, Spleen, and Bowels, especially in Dropsies and Jaundise, using it as you do the Spirits preceding. *Paracelsus* highly commends a Spirit of Vitriol, which he calls *Corrected*, which he directs to be prepar'd by Cohobating the Spirit upon that which remains in the Cornute after Distillation, reiterating the same Cohobations and Distillations eight or nine times. After which he directs you, that having pour'd the last Spirit, upon the sediment, together with as much rectify'd Spirit of wine as is necessary to reduce the whole into a paste, you should put it into a Retort, and distil it with a gradual fire as before, highly recommending this Spirit against the Epilepsy, giv'n from five or six to eight or ten drops in Cephalick waters.

Hartman very much commends a Spirit, which he calls Anti-Epileptick, which he composes of equal parts of Vitriol of *Hungary* well purify'd and the Urine of healthy Children, digested for some time in a glass Cucurbit cover'd, in *Balneo Maria*, and then distill'd in the same Bath. Affirming that the first water that distills is an excellent remedy to cure the pains of the Gout apply'd to the part; and that the second is a particular remedy for all diseases of the eyes. Afterwards he directs you to powder and put the sediment into a Retort, and having fitted and luted a large Recipient to the Beak, to draw forth with a naked and Gradual fire, a Spirit of an Austere savour, and of a Sulphury smell, and to rectify it once or twice. Affirming that this Spirit is an infallible remedy for the absolute cure of the Epilepsy in children, mixing a Scruple of it with the distill'd water of Peony-Roots, and Flowers of Tylet-tree, and giving half a Spoonful in the Fit, and continuing the use of it by Intervals as occasion serves.

CHAP. XXVII.

Of the Salt and Earth of Vitriol.

IT is not enough to have drawn out of Vitriol by distillation, the flegm and several Spirits which it contains; for there is some salt part of the Vitriol which remains in the *Caput Mortuum* which remains behind, and which, to speak properly, is a real Vitriol, though most writers have tak'n it for something distinct, and of another nature than Vitriol. But to have it, such as it is, you must make a Lye of that which remains after distillation, and having filter'd it, evaporate the superfluous moisture, that you may have the Salt which you shall find coagulated at the bottom of the Vessel, of a colour inclining to carnation, by reason of the impression of the fire which made the Vitriol red. This Salt having the savour of Vitriol which is the principal matter, retains also the qualities, especially the Emetick. But though the small quantity of this Salt, or to say better Vitriol, which remains in the *dead head*, after distillation, is not worth the looking after, nor the making of the Lye; yet we are forc'd to do it for the Earths sake that accompanies it, the astringent quality whereof all Writers highly commend. For to have it in its purity, if you will not make a Lixivium, you must at least wash it over and over again, till it be all pure, and without any mixture of the salt parts of the Vitriol, that it may have the qualities that are attributed to it; which are chiefly, to heal Dysenteries, Lienteries, and Diarrhœas, to stay vomiting, and both outward and inward Fluxes of blood, to help weakness of the stomach and bowels, and to cleanse wounds and ulcers.

But although the salt vitriolick substance which you may draw from the mass which remains after distillation, may have all the virtues which writers have ascrib'd to the

the Salt of Vitriol; yet the small quantity which is to be got, is the reason that white Vitriol is made use of, dissolv'd in water, filter'd and crystalliz'd, instead of Salt of Vitriol; and that so much the rather, because it produces the good effects which are expected from Salt of Vitriol with much more gentleness, the chief of which are to expel by vomit or stool the bad humours that gather in the stomach or in the bowels, to prevent their sending up vapours to the brain, and their causing the Epilepsie, and other maladies of the head; to kill worms, cure intermitting Agues, and to open obstructions of the Liver and Spleen, the Kidneys and passages of the Urine. The dose is from half a scruple to half a dram, in broth or in some other proper liquor.

I could here insert many other preparations of Vitriol, but being out of use, I omit them.

CHAP. XXVIII.

Of the Preparation of Sulphur.

THE great resemblance which there is between the acid Spirit of Sulphur and that which is drawn from Vitriol, of which the first is the ground, obliges me to give you the preparation thereof next in order. I intend not to speak of that Sulphur which all Chymistry acknowledges for one of the principles of mix'd bodies, not more then of that which is to be separated from Antimony, Cinnabar and some other Minerals, of which it makes one part of the Composition; but of the Common ordinary Sulphur, which passes for a Rosine, or Gum, or fat Oily Mineral juice; which is found in the bowels of the Earth pure or mix'd with it, or with Stones, or in certain waters from whence it is separated by art. The fit Rosiny and Combustible part, is that which is in greatest quantity in the Composition of Sulphur, but it is accompany'd with a little Salt, or acid Spirit, some little water and some Earth, which remains after the consumption and separation of the rest of the parts by fire. Brimstone is brought pure and refin'd to our hands. The best is the smoothest, and that which burns without going out when it is once lighted. The colour whereof inclines a little thought toward Green, and is most proper for Chymical preparations.

The Gummy and Combustible part of Brimstone prevailing above the rest and being of it self, it not only rises with ease when it is set over the fire in Vessels, but it carries with it some other parts; so that there remains little or nothing in the Vessel, after long exposing to the fire; as you may observe by the following preparation of the flowers of Brimstone.

Having plac'd an Earth'n Cucurbit glaz'd within, somewhat low, and fit to resist the fire upon a Furnace proportionable, lute the inside of the upper-part of the Furnace, as also round about the Cucurbit, so that no Flame nor Sparkle of fire may go out that way, to set the Sulphur on fire, leaving nevertheless round about three or four little Registers, with their shutters fit to take off or put on as occasion serves. Then having kindl'd a moderate fire in the Hearth-place of the Furnace, put into the Cucurbit about three or four ounces of Brimstone grossly powder'd, and cover it with a glass-head whose mouth may be proportionable to the neck, so to straight'n it that there may be no occasion of any Lute. By this means the Flowers of Brimstone will rise, and gather together in the head of the Cucurbit. You must always keep a moderate and equal heat under the Cucurbit, take off and keep the Flowers that stick to the bottom of the head, and cast in new Sulphur, as the first ascends in Flowers; and have two heads of the same bigness, to cover the Cucurbit with the one, while you take off the Flowers from the other. You may also make use of several Vessels at a time, of those of Earth made in the fashion of *Aludels*, having a large beak upon every side, to each of which you may fix half-Balls, having an opening at the top, which you may cover with a glass-head like the Cucurbit's. And by this means one part of the Flowers will sublime into the head, the other issuing out of the beaks of the *Aludels*, will stick to the inside of the half Balls, whence you must

must take them off from time to time, with a spoon fitted for the purpose. Some Writers set down preparations of Flowers of Sulphur, with an addition of Myrrh, Aloes, Olibanum, Mastich, Benjamin, Saffron, &c. beating these ingredients, mixing them with the Brimstone, and subliming them together, as you sublime the flowers of Brimstone. But though these persons have found some Assenters, nevertheless it being certain, that these drugs are not able to endure a fire necessary for the sublimation of the flowers of Sulphur, without a remarkable dissipation of the best parts, I think it better to mingle one or t'other, according to occasion, with the flowers of Sulphur, without any farther trouble.

The preparation of white flowers of Sulphur, of which *Angelus Sala*, and others after him have prescribed the receipt, deserves to be here set down.

Take half a pound of calcin'd Niter, and fix'd with Sulphur, according to the method set down for Sal-Polycrestes, speaking of the preparations of Niter; and having reduc'd it into very fine powder, and mix'd it with a pound of Brimstone in rolls, powder'd also, make a sublimation thereof in a Cucurbit plac'd upon a Sand-bath, cover'd with its head, employing fire and time requisite. By this means you shall have the flowers of Sulphur white, less unpleasant, but at least as efficacious as the Magistery of Sulphur, of which I shall give you the preparation, more out of reverence to the fame of those ancient Authors who have wrote thereof, then for any good opinion I have of it.

CHAR. XXIX.

Magistery or Milk of Sulphur.

THE method which most Authors have observ'd for the preparation of Magistery or Milk of Sulphur, is this: They mingle one part of the flowers of Sulphur, with three parts of Salt Tartar, and having put this mixture into a great Earthen-pot glaz'd within, they pour upon it seven or eight times of its weight in River-water; then putting the pot over the fire, and having boil'd the substances five or six hours, or till the flowers of Sulphur are dissolv'd in the liquor, adding nevertheless from time to time more boiling water, to supply the place of that which is evaporated in boiling. And when the liquor is consum'd to the half, they empty by inclination the clear liquor warm into a great earthen Pipkin glaz'd within, pouring upon it at the same time distill'd Vinegar, or liquor of Allum, till the ebullition cease. By this means the acid of the Vinegar, uniting it self with the fix'd Salt of the Tartar, which had dissolv'd the flower of Sulphur, constrains it to forsake them; and those flowers having lost their yellow colour in the *Menstruum*, and having left the parts of the Tartar which the acid of the Vinegar or Tartar has fill'd, swimming immediately among all the parts of the liquor, give it the colour of milk, till they come at length to be precipitated to the bottom of the liquor in a white substance. At which time having pour'd out by inclination the liquor that swims at the top, they wash them several times in fair water, till having carry'd off by lutions all the acrimony of the Dissolvent and Precipitant, they become altogether dulcis'd, and fit to be dry'd and kept under the name of Magistery or Milk of Sulphur.

There is also another Magistery of Sulphur, which is this way to be prepar'd: Having put into a great Iron-Caldron, a pound of Sulphur in powder, and two pounds of Quicklime, and pour'd upon them a good quantity of ordinary water, boil them together till the liquor be wast'd to three quartis, or for more certainty till it be become very red, and that you may judg by that, that the Alkali of the Lime has penetrated and dissolv'd the Sulphur. At which time having pass'd the liquor through a bag, leave it to cool, and pour out by inclination the clear liquor into a great earthen-Pot glaz'd, then pour upon it Urine very hot, till ebullition cease, and then the fix'd Alkali of the Lime being united with the volatile Salt of the Urine, leave the Sulphur which it has dissolv'd to precipitate to the bottom. Then leave the substances to settle from the evening till morning. After which having pour'd

pour'd out by inclination the liquor that swims above the Sulphur precipitated, wash it ten or twelve times, till all the acrimony of the Salts be carry'd off.

Writers do very much recommend the Magistery of Sulphur, calling it the Balsom of the Lungs, and a singular remedy against Coughs, Asthma's, Ptyticks, and to divert Fluxes of humours that fall upon the breast, to facilitate expectoration, ease the pains of Colicks, dissipating the wind of the stomach and intestines. It is giv'n from five or six to ten or twelve grains, in some Cordial or Pectoral liquor, reinforced with Cinnamon-water.

But by reason of the various alterations that happen to Magistery of Sulphur, as well in its dissolutions as in its precipitations, and the ill qualities which it receives from the Substances with which it is mingl'd, and of which the ill scent that remains after Lotion is an evident sign; I think it better to lay it aside, and rather to make use of the Spirit of Sulphur, especially the white ones, of which I have shew'd you the preparation, in regard that being less unpleasant, they may be able to work all the effects which Authors promise to themselves from the Magistery, giving them from one scruple to half a dram.

CHAP. XXX.

Of the Distillation of Sulphur.

THE small quantity of Spirit which is drawn from Sulphur, the impossibility to have the Spirit without burning the Sulphur, without the assistance of the air, and the difficulty to meet with Vessels fit to be made use of in this distillation, have very much taken up the thoughts of several persons, and of such in particular as have not accustomed themselves to fally their fingers with other Chymical preparations. There is hardly any Author that has not given a different preparation. They have also propos'd several Vessels, by the means whereof they have promis'd success to those that have them, and know how to make use of them. But all that others have wrote, does not hinder me from acquitting my self of the obligation that lies upon me of imparting to publick view the most easie and best means which I make use of to succeed in this distillation, and the form of the Vessels themselves.

You must have at least four several Vessels for the distillation of Spirit of Sulphur, of which the lowest, that is to be the biggest, and to be of Glass or Potters Earth, is to receive the Spirit while it distills; the second is to be plac'd in the middle of the bottom of the other, and to serve as a prop to the third, which is to contain the Sulphur; and the fourth is to be hung or plac'd in that manner that it may stop and make room for the vapours that arise from the Spirit of Sulphur, at the time when it burns. The last Vessel is of glass, and usually made like a Bell, bigger or lesser, and sometimes open at the top, sometimes not; but that wherein the Sulphur burns, is to be of Earth fit to resist the fire, and to be upheld by some little pot of fine Earth or Glass, for if it should rest upon the bottom of the Vessel below, it would suck up all the Spirit that gather'd together within it. Usually we stay for Rainy-weather, or else moisten the inside of the Bell and the Vessel below to facilitate the dissolution of the vapours, and by that means to obtain a greater quantity of Spirit. It is also convenient at the beginning, to put in some little water into the bottom of the Vessel below, that the Spirit may mix with it the more easily without changing its nature, since it may be separated with all its force, by rectifying it like Spirits of Salt and Vitriol.

I my self for this distillation make use of large pots, call'd vulgarly *Salaires*, or powdering Vessels, containing about two Pailfuls. These pots have a Rim round about their upper part, wherein there are three or four holes; which holes I wet, and fill the bottoms with water. Then having put in a little pot of Earth, I place upon it the pot of Earth where the Sulphur is to burn; I chuse the greenest brimstone, and in smallest Rolls, and having melted it, and dipp'd Cotton-weiks into it, I kindle and cause some part of it to burn in the pot, covering at the same time

with a Glass-Bell, such as Gardners make use of, proportionable to the mouth and rim of the pot, and moistned in the inside. By this means, the white vapours that rise from the Sulphur, finding room enough as well in the capacious part of the pot, as in that of the Bell, and moisture enough to fix them, dissolve into Spirit; so that you shall have a greater quantity by continuing this operation, still putting in and lighting more wicks as the first are consum'd, than by any other contrivance yet found out. You shall see in this Book the figure of the Pots and their Bell. But the invention would be much more profitable, were it possible to make such Pots and as big in Glass-houses; for the Pots of Potters-Earth are not able to withstand any long time the subtle force of the Spirit of Sulphur, which in the end penetrates them, in regard they always suck up some part, especially if you be not careful to moisten them within-side from time to time.

I have also given you the figure of the great Plates of Iron, with which I use to receive the Spirit of Sulphur which distils from the Bells open at the top, and having two Ears or handles to support the sticks that bear them; the opening whereof I cover with a little head of Glass, to which you may join a small Receiver, proceeding to the distillation of the Spirit, after the same method as before, only that you must leave about a fingers distance between the brim of the Bell hung and the brims of the Platter, so ordering it, that the flame of the Sulphur may not touch the Bell while that the Sulphur has enough of air to burn. True it is; you have not so great a quantity of Spirit by means of these Vessels, and that one part of the vapours is lost, neither dissolving in the Bell nor in the Platter; but the Spirit is very good and penetrative; and using a good number of Vessels, you may have a reasonable quantity of Spirit.

The Acid of Sulphur passing for the foundation, and the first and principal matter of Vitriol, to which it communicates its most considerable vertues; you may with good reason attribute to Spirit of Sulphur, almost all those of Spirit of Vitriol. But besides that the savour of Spirit of Sulphur is much more acceptable than that of Spirit of Vitriol, its effects are much more profitable, as well to quench the heat of Fevers, especially Cholerick, as to resist the putrefaction of humours, to create an appetite, fortifie the Stomach and Vitals, to cure diseases of the breast, and particularly Asthma's and Pryicks. And though the most part of the world believes, that Salts are injurious to the Lungs; yet I can assure them, that some years since there was a Preacher of this City, who having almost lost his voice, wholly recover'd the use of it, by the use of Spirit of Sulphur; which he took in his usual drink, in his broths, and also among his victuals, and that it was only the Spirit of Sulphur that I prepar'd him, which cur'd him of so strange a distemper.

CHAP. XXXI.

Of Salt of Sulphur.

Sulphur consuming it self almost all in the fire, and leaving after its consumption only a little Earth, we cannot pretend to extract a true Salt, unless you will give to this Spirit, as liquid as it is, the name of acid Salt of Sulphur. For that reason it is, that Authors who have written of Sulphur, have giv'n us no preparation of its Salt. But Chymistry, which upon many occasions, sends its assistance to nature, fails not of means for the preparation of a Salt, to which we may justly give the name of Salt of Sulphur, of which I will shew you two or three preparations.

Beat a pound of excellent Niter with as much Sulphur, and having plac'd a good Crucible upon the *Culor* or Iron-square in the Hearth-place of the Furnace, and kindl'd about it a good Coal-fire, the Crucible being red-hot, put into it about an ounce of the powder of Niter and Sulphur, which will quickly light, and when the Flame is pass'd throw into the Crucible as much new powder, and still let the Flame cease, till you have thrown it in all. After which keep a quick fire round about the

the Crucible for two good hours: then letting the substances cool, make a lye in an Iron-Skillet very clean, and having filter'd the hot liquor put it into a Cucurbit in a Sand-Bath moderately hot. Then having evaporated about three quarters of the moisture, and cool'd that which remains in the Cucurbit, continue to pour upon it by little and little good Spirit of Sulphur, so long till you can perceive no more Effervescency. That done, having rekindl'd the bath-fire evaporate in the same Cucurbit plac'd there the superfluous moisture to the thin Film, if you desire a Salt in Crystals, or to the driness of Salt if you desire it in powder or in the lump. By this means you shall have a very white Salt, compos'd of the fix'd Salt part of Niter, and the acid of Sulphur, which may be administer'd with success, as well to quench the heat of Fevers, as to open all obstructions of the Bowels. It is mix'd in ordinary Drink or other Liquors, wherein the pleasing taste of the acidity must be your rule to go by.

You may also prepare a Salt of Sulphur with less trouble, observing a method which was imparted to me by *Monsieur Freslin*, a person as curious after the knowledge of natural things, as solid and judicious in both the one and the other Philosophy. Put into a Retort of Glass large enough, a pound of Niter in Powder, and having pour'd upon it Spirit of Sulphur rectify'd, till there appear no more Effervescency upon their conjunction, and having well shak'n the Retort, entirely to dissolve the Niter in the Spirit, place the Cornute in a Sand-bath, and having fitted and luted a large Recipient to its beak, begin your Distillation with a soft fire, then augmented by degrees, by putting the lighted-coals upon and about the Sand-bath, and round about the Cornute, the better to force what is to be forc'd out of the Niter. By this means you shall have a good Spirit of Niter very proper for all sorts of uses, while the Spirit of Sulphur being strictly united with the fix'd Salt of Niter, makes but one body with it, which is to be found in a lump in the Retort, when brok'n; very white in colour, and very pleasing for its acidity in taste; the vertues whereof are the same with that before.

The most natural reflection that can be made upon this preparation is, that the Niter being compos'd of a double Spirit, the one passably acid, the other Sulphury volatile Salt, both engag'd within the pores of a natural fix'd Salt, and that the Spirit of Sulphur being compos'd of parts more solid and penetrating then those of Niter, and capable of insinuating themselves into all the parts of this Salt; it happens that in the mixture of these two substances, the parts of the Spirit of Sulphur penetrate the whole body of the Niter, and so assisted by the operation of the fire, they have strength enough to force out and take the place of the nitrous Spirits, among the parts of the fix'd Salt; to which they unite themselves so closely that they make but one solid body, the union whereof the fire can hardly separate: the Spirits of Niter fly away in red vapours, and pass into the Recipient where they condense into Liquor.

You must also consider, that by this operation you gain the Spirit of Niter, which else would vanish, when the Salt is calcin'd with the Sulphur. And I beleive that the consideration of this Spirit's leaving the mixture, ought to make us conceive a very good opinion of the Salt which remains in the Retort; so little reason we have to fear its Effects. Since that besides that we use Niter as it is for several Internal uses, and that we often mix the Spirit in Potions, as also in drinks; here remains nothing but the fix'd part of the Niter not only good of it self, but much more excellent by its union with the Spirit of Sulphur which failes not to temper the dreaded Acrimony of the Salt.

You may also prepare a Salt of Sulphur, which being nothing inferiour to the former two, is much more proper to purify the mass the of blood, and to expel by sweat or insensible transpiration sharp and subtle humours, and which will be also as white and as pleasant. For this purpose put a pound of Salt of Urine, very pure, and white into a Cucurbit large and high, and having pour'd upon it Spirit of Sulphur well rectify'd, till Ebullition cease, place the Cucurbit in a Sand-Bath over a moderate fire, and evaporate the superfluous moisture to the Film, separating and drying the Crystals; or else go on, and evaporate the moisture to the dryness of a Salt. For this volatile Salt of Urine, though fix'd for a time by the Spirit of Sulphur, not losing its first nature, may be able to shew its Effects, especially when the acid of the Sulphur which has fix'd it, meets in the stomach some other body to which it can unite it self, and so restore to the volatile Salt of Urine its first liberty. The volatile Spirit of Urine may be also us'd, which to speak properly is nothing

but its Salt dissolv'd, instead of its Salt coagulated, and by uniting it with Spirit of Sulphur, reduce these two Spirits into a white and Salt body like to that which I have spok'n of. They that can away with the acid savour of these Salts, may take from half a scruple to half a dram, and sometimes a whole dram in some convenient Liquor.

I omit many other preparations of Sulphur, which may be found in several Authors, of which some are not feasible, others not true, and others altogether unnecessary and out of use: referring the Reader to my Galenick Compositions for the preparations of two Balsomes of Sulphur there prepar'd.

CHAP. XXXII.

Of the Preparation of Arsenick.

WE look upon Arsenick as a kind of Soote or a Mineral juice, thick, unctuous and participating of the nature of Sulphur, but very contrary to the Balsome of our life. And therefore it is reck'nd in the number of Poisons, being never made use of but with great caution, and after the dangerous parts of it have been separated and corrected by Art. Most Authors who confound the names and qualities of Arsenick, observe but three sorts, the white, the yellow, the red. But I find four, of which the first is ordinary Arsenick, which is white, and sometimes in some parts transparent as Crystal: The second, having the shape of that Arsenick which I have nam'd, in colour is yellow, and bears the name of *Realgar*, or *Realgal*. The third is also yellow, but of a scaly substance, hard to beat, like a Mineral, and bearing the name of *Orpiment*: the fourth call'd *Sandarac*, is of a red colour, very like the ordinary Arsenick in shape, and *Realgar*, differing only in colour. The ordinary Arsenick, which is brought us, is a sublimated substance of equal parts of Sea-Salt and *Orpiment* in powder, mix'd together in sublimating Vessels; so that we need not wonder that this Arsenick is a most pernicious poison, since that in its sublimation, the Acrimony of the Salt, augments yet more the natural Malignity of the *Orpiment*; and that the same Salt assisted by the Vitriol, being mix'd with the Mercury at the time of its sublimation, renders it corrosive, and consequently a dangerous poison. I also think it is very ill done of those Persons that mingle the same Salt with Arsenick, or that add to it the Filings of Steel or Copper, when they sublime it out of a design to dulcify it, because those substances rather increase then abate its Acrimony, which I believe can never be truly qualify'd: not knowing any preparation, that to any appearance is able to dulcify it in such sort, as that which is call'd the Ruby of Arsenick, which as thus prepar'd.

Beat the Vulgar Arsenick in a Mortar, and having put it into a Glass-Cucurbit, of which at the least three fourths must remain unfill'd, and plac'd it in a Sand-bath cover'd with a blind head, make sublimation thereof with a gradual fire, as you do to Mercury. Then throwing away the Fæces, and the powder, which separating from the Lump, sticks to the Vessels, repeat sublimation, and separation of the fæces and powder three times. After which having finely powder'd and mix'd this Arsenick sublimated with equal parts of Flowers of Sulphur, make the last sublimation, by means whereof the Flowers of Sulphur, uniting themselves inwardly with the Arsenick, and sublimating with it, will not only imprint upon it, but also take themselves the colour of Rubies, of which this Arsenick carries the name, and of which some Authors recommend the use from three or four to seven or eight grains, in some Confection, Conserve, or Looch, in Maladies of the Lungs, or in such where there is occasion to provoke Sweat, as also for the cure of Malignant and obstinate Ulcers, applying it upon them. But notwithstanding this preparation, though it may be good to lay upon Ulcers, or for external cures, I believe that it is not to be given inwardly; in regard a remedy of this nature ought to be always suspected, and for that there be other remedies and Medicaments far more safe then any that can be made of Arsenick.

There is a preparation of Arsenick very serviceable for external cures. For they make

make a Regulus of it, out of which they draw a moist substance like Butter, like the Regulus of Antimony, proceeding thus: Having beaten to powder, mix'd, and put equal parts of Niter and Tartar in an Iron Mortar heated, and having put a lighted coal-fire to it, the detonation being pass'd, weigh six ounces of the combustible matter in the Mortar, and having beaten them and mix'd them with eight ounces of Arsenick or Orpiment, powder'd in the same manner, and four ounces of filings of Steel, put this mixture into a great Crucible, plac'd upon a square Iron in the midst of a proper Furnace, and having well melted the substances, pour them speedily out into an Iron Horn, heated before, and rubb'd within with Candle-grease, knocking at the same time upon the Horn to hasten the precipitation of the Regulus to the bottom; the matters being cold, separate the Regulus from the scum of the Metal, which will be at the top, to use it in making the Spirit and Butter according to the following method.

Reduce this Regulus to powder, and having mix'd it with double its weight sublimated corrosive, put this mixture into a glass Retort encompass'd with lute, of which two thirds must be very near empty. Then having plac'd it in a little close Reverberatory, begin your distillation with an immediate, but very soft fire, then augmented by little and little, keeping apart the smoaking Spirit that comes out first, and receiving into another Vessel the butter-like liquor that will succeed. After which, having chang'd the Recipient, increase the fire, till all the Mercury of the sublimate be descended. Then expose this Butter of Arsenick to the Sun, and when it is dissolv'd into liquor, keep it in a double glass Bottle well stopp'd, to eat away the proud flesh of wounds and ulcers, and to take off the rottenness of the bones, which it does with more violence then Butter of Antimony; for which reason a less quantity must be us'd, and with an extraordinary wariness. The Spirit that comes out first, is very corrosive, and will perfectly dissolve Mars, and penetrate several other Metals. Nor is it to be wonder'd, that the substances which proceed from the conjunction of Regulus of Arsenick with Mercury sublimate corrosive, are more corroding then those drawn from Antimony mix'd with the same Mercury corrosive, since the parts of Arsenick are infinitely more malignant and corrosive then those of Antimony, and for that the mixture of the Mercury sublimate much encreases that very malignity and corrosion.

You may also prepare a fix'd Arsenick, or a fix'd liquor of Arsenick, thus: Pulverize eight ounces of Arsenick, twelve ounces of Niter, and twelve ounces of Tartar, and having well mix'd them, and plac'd a Crucible upon a Culot, in the middle of a Furnace built under a Chimney, kindle a good fire round about the Crucible, and when it is red hot, throw into it about an ounce of the powder, leaving the Niter and the Tartar alone to operate upon the Arsenick, and staying till the stinking smoak that will rise be gone; continuing this projection, according to the same method, till all the powder be spent, taking care to stir the substances from time to time with a long Iron-Spatula, to cause the Sulphur of the Arsenick to exhale; the malignity whereof you must avoid by keeping at a distance from the vapours, being as hurtful as their scent is noisome. After which keep a violent fire round about the Crucible for five or six hours, or else, which will be better, during a whole day, the better to dissipate what the Arsenick has of evil. Then leaving the Crucible to cool, and having powder'd the lump which remains within it, separate by often lotions whatever it contains of Salt, and when it is rightly dulcify'd, keep the powder in a double glass-bottle well stopp'd; and this is that which some call fix'd Arsenick, that some commend for a good Sudorifick; but the cheifest use of it is to cleanse wounds and Ulcers. For which purpose instead of washing the powder, it will be enough to expose the lump to the moisture of a Cellar where the Salts dissolve into Liquor, which you must keep in a double bottle well stopp'd, by the name of fix'd Liquor of Arsenick: good for the cure of Malignant Cankrous and Fistulous Ulcers, especially Venereal, mixing it with Vulnerary waters in a greater or lesser quantity, according to occasion.

I shall not any farther enlarge upon preparations of Arsenick, as dangerous, as they are little in use.

CHAP. XXXIII.

Of the Preparation of Ambergrise.

THE several opinions about the Original of Ambergrise do not at all change its nature. For though some have taken it for the scum of the Sea; others for the Excrement of certain Birds which appear in the Islands of *Madagascar*, or in some of those toward the bottom of the *Archipelago*: others for the Sperm of the Whale; yet they who affirm it to be a Bitumen that issues out of the bowels of the Earth, and empties it self into the Sea like Amber, seem to be the most rational in their thoughts. For if it were the Scum of the Sea, it would retain some qualities or things which are contain'd therein. And if it were an Excrement of Birds, we should not meet with it in such huge Uniform Lumps, weighing sometimes above a hundred pound. Besides, were it an excrement of Birds or the Sperm of a Whale, it would dissolve in water, and would not be able to resist so long as it does the violence of the waves or the injuries of the Air and Rain, without receiving any notable Alteration.

Ambergrise according to the latter opinion flows liquid out of the Entrails of the Earth: its lightness causes it to swim upon the superficies of the Sea, and its oily substance is the reason that it does not dissolve, and that it has time to be reduc'd by the heat of the Sun into a lump sufficiently dry and solid, which is carry'd by tempests to the shoars of the Sea, where it is found not only in the *Indies* and *America*, but sometimes in our Seas near the shoar, though very rarely. And if at any time it has been found in the body of a Whale, we may well believe that that Creature might have swallow'd it for its nourishment.

Some Moderns nevertheless would assure us, that Ambergrise proceeded from certain drainings of Honey, which having in time been bak'd and dry'd by the heat of the Sun, fall off from the Rocks, where the Bees had made it, into the Sea; the Salt whercof and the Agitation of the Waves perfect their digestion, give them that colour and consistency which we observe, and at the same time the remaining parts of the Honey to yield that pleasing scent which the Mass exhales.

Ambergrise is generally of a Marble-colour, the ground whereof is sometimes more sometimes less dark, but inclining to grey and spotted with white, inclining sometimes a very little thought to yellow. It is also more or less pure according to the lesser or greater quantity of Extrinsick matter which it meets with, and which mix'd with it while it was yet liquid: infomuch that you shall find the beaks of Birds and little Insects in it. It may be easily melted over a soft fire, when it is true and right; or prick'd with a hot Needle, which melting that part where it enters, raises a pleasing and penetrating smell, by which means you may in part understand the goodness of the Ambergrise, which we may make use of sometimes without any considerable preparation, only by poudring it with a little bit of Sugar-Candy, when it is to be taken alone, or mix'd with other remedies.

The thinness of the substance of Ambergrise, is the reason that it is never expos'd to the violence of the fire, being contented usually to dissolve it in Spirit of Wine, either to separate the Terrestreities which are mix'd with it, or to keep the dissolution by the name of Essence or Tincture of Ambergrise. But its odour agreeing with that of all the best Aromatics, and having need of being exalted, we usually make choice of, and mingle some one of those which are the most potent, and whose odour is most sweet and pleasing, such as are Musk, Civet, Essence of Roses, Citrons, and the like; careful however to comply with the smell and constitution of the person for whom those Essences and Tinctures. To which effect,

Reduce into subtle powder two drams of good Ambergrise with so much the weight of Sugar-Candy, and half a scruple of Oriental Musk, and having put them into a little Matrafs, and having pour'd upon them two ounces of good Spirit of Wine, and half an ounce of Ardent Spirit of Roses, cover the Matrafs with a little blind-head; and having carefully luted the closures, expose it to the heat of the Sun,

Sun, or in Horse-dung or some such other like substance, till the Ambergrise be dissolv'd, and that there remain only some Terrestricity at the bottom of the Matrafs; at which time having unluted the Vessels, and by inclination pour'd out the Liquor that swims at the top, into a double glass-bottle, stop it close, and keep it as a Tincture of Ambergrise, and as a remedy very proper to restore and preserve the natural heat, to fortify the heart and brain and all the noble parts, to enable both men and women for Generation, and to restore the bodies of people wasted by long sickness into a good plight. The dose is from one or two drops to seven or eight in *Spanish-wine*, Cinnamon-water, or any other Cordial Liquor.

You may also reduce to fine powder two drams of good Ambergrise with the same weight of Sugar-Candy, and a scruple of Oriental Musk, and having added twelve drops in all of distill'd Oils of Citron and Orange-rinds, of Flowers of Roses, Marjoram, Lavender, and Cinnamon, beat them and incorporate them together in a Marble-Mortar with a wooden Pestle, and make thereof an Ambergrise Essencifi'd which must be kept in some small vessel perfectly well stopp'd, for the same use as the simple Essence of Ambergrise, but in lesser quantity. The quantity of a pea being enough at a time upon the point of a knife, drinking after it a little sup of *Spanish-wine* or Cinnamon-water.

CHAP. XXXIV.

Of the Preparation of Amber.

THE original of Amber, call'd by some *Succinum*, *Electrum*, *Chrysolitum*, and *Cambre*, is no less contested among Authors than that of Ambergrise. For some will have it to be the Excrement of a Bird, others the Rosiny juice of some tree, others believe it to be a Bituminous juice, that flows out of the Bowels of the Earth afterwards coagulated and dry'd in the Sun, and then carry'd by the waves of the Sea where it is found. Which I take to be the most rational opinion of all. Writers have mention'd three sorts of Amber, the first white, the second yellow, and the third Black. But because that blackness happens to the last, only through the mixture of Impurities, or through age, we throw it away, and only use the white and yellow, of which two the first is better than the other, as being better digested, more pure, more odoriferous, and more abounding in volatile Salt. However we are forc'd to make use of the yellow every day, by reason of the scarcity of the white, and, for that we extract very near the same substances as we could do from the white.

The simple preparation which Galenick Pharmacy makes of Amber, by grinding it upon Porphyry is not to be rejected, as well in regard that Amber may be very properly given in powder in the diseases of the brain, stomach, and intestines, as also of the matrix, and in losses of blood, and where there is a necessity of closing the parts; as also for that reducing it to powder, hastens the dissolution of the Amber, when you having occasion to make any preparation of it, and among the rest to extract its Tincture. To which purpose put into a Matrafs four ounces of Amber ground upon Porphyry, and having pour'd upon it Spirit of wine very well rectify'd, till it be about four fingers breadth about the substance cover the Matrafs with a small blind-head, the closures whereof must be carefully luted: then digest them in an Ash or Sand-bath over a very gentle fire, stirring them from time to time till the Spirit of Wine having dissolv'd the greatest part of the Amber, it begin to be colour'd of a fair yellow. After which having pour'd out by inclination the yellow liquor into a bottle, put new Spirit of wine upon the sediment, and cover again the Matrafs with its blind-head well luted; set it on the same Bath over the same heat, and keep it there till the Spirit of Wine have almost dissolv'd the rest of the Amber, and that it be almost colour'd like the former. At which time having unluted the Vessels, pour'd forth by inclination and mix'd that Tincture with the former, pass them both through a sheet of coarse paper, and put them into a small Cucurbit of glass, plac'd in the same Bath, cover it with its head, fit a small Recipient

patient to the neck, lute up all the Closures, and with a soft fire draw off about half the Spirit of wine; then setting the Vessels to cool, put up in a glass bottle well stopp'd that which remains in the Cucurbit, and keep it by the name of Tincture of Amber, principally to be us'd in distastes of the Brain and Matrix, giving it from one scruple to a dram in proper Liquors.

You may also weaken the Spirit of wine by pouring water upon the dissolution of Amber, and constrain to forsake those parts of the Amber which it had dissolv'd, and to permit them to precipitate in yellow powder to the bottom of the Liquor, which is that which is call'd Magistery of Amber. But there is no profit in it; for besides the wast of time, fire and Spirit of Wine this Magistery is no better than Amber simply ground upon Porphyry.

Schroder proposes a Magistery of Amber, which he prepares, by dissolving it in Vinegar distill'd, filtering the dissolution, drawing off the Vinegar by distillation, dissolving the sediment in Rose-water, and filtering the Dissolution; all which operations he repeats three times, only he precipitates the last dissolution with Spirit of Vitriol or juice of Citrons, commending it for a good Sudorifick, being giv'n from six to twelve grains in Malignant Fevers, and the plursify. But the acid of the Vinegar and the precipitants changing the nature of the Juices, I do not believe the Magistery can produce the Effects which he ascribes to it.

CHAP. XXXV.

Of the Distillation of Amber.

THE most plain and ordinary way of distilling Amber is this, fill about a third part of a glass Retort with Amber bruis'd; and having put a little Sand at the bottom of a proportionable Capsula, plac'd in a proper Furnace, set the Cornute upon it, well luted round about, and cover'd all over with Sand except the neck; fit and lute a large Recipient to the neck, cover the Capsula with a proportionable Duomo; set fire to the Furnace, and moderate it so that the Amber being melted may not boil, nor pass through the neck of the Retort into the Recipient; but afford its Flegm by degrees, then its Spirit its volatile Salt and Oil; of which that which comes first will be clear, but that which follows, will colour more and more, till the last appear of a brown colour and very thick. This Distillation is to be long, at least four and twenty hours. Nor is it necessary to force the fire too much, no more in the middle than in the end of the distillation: for besides that the substances which should come forth are not very weighty, and that too violent a fire would alter them very much; you may also make advantage of that which remains in the Retort, as I shall shew you afterwards.

You may also distill Amber with a naked fire, putting it into a Retort of Potters Earth or glass, luted about, and plac'd in a close Furnace of Reverberation. But if you are not very careful to govern your fire, you may endanger the burning the Amber, forcing it out of the Retort, and breaking the Recipient. And therefore the distillation in Sand is to be prefer'd before it. You may also bruise the Amber when you would distill it, and mix equal parts of Gravel, Flints brok'n, or Ashes which have serv'd for Lye. In regard this separation of the parts of the Amber may facilitate, the separation and sublimation of the substances, yet never diminish their goodness.

The Distillation of the Amber, being finish'd and the Vessels being cold and unluted, and having scrap'd the volatile Salt together, risen in little Crystals and sticking to the neck of the Retort and Recipient, put it into a convenient bottle. Then after you have pour'd out the substances contain'd in the Recipient into a Matraass, wash the Recipient with hot water, to dissolve and gather together the volatile Salt and Oil that may remain behind, and pour'd the Lotion upon the other substances, cover the Matraass with a blind head well luted; and having set it to digest in a Sand-bath moderately hot for ten or twelve hours, and often shak'd the substances together, open the Matraass, and having separated the Oil from the watry, Spiritous and Salt part,

part, make a rectification thereof separately, that is to say, that of the Oil, incorporating it with as much wash'd ashes as it can suck up, putting this mixture into a Cornute of glass over a Sand-Bath, and with a very moderate fire drawing off the Oil that will distill from thence, of which the first will be white and clear, that which follows a little colour'd, and the last somewhat brown. As for the watry Spirited Salt part, having filter'd it and put it into a small glass Cucurbit, plac'd in a Sand-bath over a small fire, evaporate about three quarters of the superfluous moisture, then leaving it for sometime in a cool place, separate and put up the Crystals, afterwards evaporating also in the same Bath the Liquor that swims above them, to the end you may save all the Salt that remains, though it will not be much more in quantity than the former.

But to make the best advantage of all the sediments, as well of the first distillation, as of the rectification of the Oil, having reduc'd those substances to powder, incorporate them with their weight in Quicklime, newly reduc'd to powder also, and having put this mixture into a large glass Cornute plac'd in a Sand-bath, and fitted a half Ball to its neck, you shall draw forth still with a moderate fire a good quantity of Oil, of which the first will be very white, the rest that follows clear enough, though somewhat higher colour'd.

Oil of Amber is principally made use of in Apoplexies, Epilepsies, Convulsions, Palsies, and all cold diseases of the Brain and Nerves, but chiefly for the distempers of the Matrix. It is also highly commended against the Worms, and pestilential air, as well taken inwardly from one or two to five or six drops, incorporated with Sugar in powder, and dissolv'd in some proper liquor, as us'd to anoint the Nostrils, Temples, and Sutures of the Scull; in all which distempers you may also make use of the volatile Salt, which is moreover accounted a strong diuretick and diaphoretick, given in convenient liquors from five or six to fifteen or twenty grains.

The distillation of Amber may serve as an Example for the distillation of Asphaltum, Jet, Pitcoal, and all sorts of bituminous substances.

CHAP. XXXVI.

Of Metals in general.

Metals are solid, ponderous, malleable bodies, fusible in the fire, and of a substance equal in all its parts. For the heat of the Sun, not only making its impressions upon the surface of the Earth, to assist the production of things which are in view, particularly plants; but penetrating also farther into the inward Mass, there to impart his heat necessary for the substances which are there conceal'd, he produces continual Generations, which are attended by the growth and perfection of such matters as are there engender'd, of the number of which are Metals. I also believe that as the Plants which the Earth produces, take the first matter of their seed from the juices of the Earth or the influences of the Stars; so that Minerals in the same juices find the Elements of their substances, though very much different from those of Plants; and that this at the beginning must be a Metallick seminal juice, but capable not only to produce in abundance the Metal, the nature of which it infolds within it; but also to receive it self, and to impart to the Metal hardness, solidity, weight, and those other qualities, which distinguish it from other Metals; and though the growth and perfection of Minerals be not so visible as that of plants; yet we have no reason to doubt, but that according to the existency which the Metals have drawn from the Metallick juice, from whence they had their seed, they also produce the same seminal juice which renews and multiplies its own kind, as Plants do. Of which we have no reason to doubt, because we see that Metals do grow again in those parts of the Mines, from whence others of the same nature had been digg'd out before.

But though the Sun has the principal share in the generation, growth and perfection of Plants; that hinders not, but that the other Stars may also contribute their

Influences. Nor was it in vain that the Ancients appropriated to every one the name of a Planet; affirming that every Metal had some affinity with the Planet whose name it bore. Considering that the Air, according to the opinion of some, contains in it self the first seeds or seminal dispositions of things which the Earth has accustom'd to produce, and that without question it has receiv'd them from the Stars, which shewre down their influences upon all sublunary bodies. Of which we see the lively effects upon the superficies of the Earth as well in the alteration of certain Earths into stones, as in the regenerating of certain Salts, among the rest, that of Vitriol, and the increase and growth of some Metals, particularly of Lead.

Writers acknowledg six different Metals of which they make three orders: in the first of which they have put the two most noble and perfect; that is to say, Gold, which they call the *Sun*, as well for its yellow colour, as from the particular Influences which they say it receives from the Sun; and Silver, which they call the *Moon*, as well by reason of its white colour, as for the particular dominion which they think the Moon has over it. In the second Rank they have put Iron and Copper as being less noble, less compact, and more impure in their substance, though hard and solid. They have also join'd them one to the other, as well because of their great inclination to unite together, as because their substance is not much different, having giv'n to Iron the name of *Mars* and to Copper that of *Venus*, because of the great Sympathy which they imagin'd there was between those two Metals and those two Planets. They have put Tin and Lead in the third rank, as being least hard and more easy to melt, calling the first *Jupiter* and the last *Saturn*, for the same reason. I come now to the most necessary preparations of these Metals beginning with that of Gold.

CHAP. XXXVII.

Of the Preparations of Gold.

ALL the best writers affirm that the Sun has a particular influence over Gold, from whence it comes to pass that this noble Metal has a peculiar vertue to strengthen the heart and cherish the natural heat. I will not dispute what influences it may receive from the Sun; but many believe that Gold in its natural estate, or which it may resume, though alter'd by many preparations, can no way impart any vertue either to the heart or any other part of the body. Others have laugh'd at the Ancients for putting Leaf-Gold into Confection Alkermes, and into many Cordial powders and other remedies. I confess they had reason, were it not for what I have related from the mouth of Experience in the 146, and 147 pages of this work; to which I refer the Reader. Let it be as it will, since there is no danger in the use of Gold, I know no reason why we should abstain from giving it in leaves, provided it be well purify'd before hand, any more then from giving it in any other condition being prepar'd according to art.

There are that wash Gold with Tartar and common Salt, when you would take off the outward filth: but when you find it impregnated with other Metals, either naturally in the Mine, or by Adulteration, you must make use of other means, the chief of which are immerfive Calcination, Fusion and Calcination with Antimony, Fusion and Calcination with Lead in a Cupple, and Cementation.

CHAP. XXXVIII.

Of the Calcination immerfive of Gold, by Regal Water, or by the means of Gold Fulminant.

PUT into a Matras the quantity of filings of Gold which you intend to purifie, and having pour'd upon it three times as much the weight of Regal Water, plac'd the Matras in a Sand-bath moderately hot, from whence when the Gold is dissolv'd, pour out the clear liquor into another Vessel, and after that a small quantity of Regal-water upon the sediment; then having digested them awhile in the same Bath, pour'd out by inclination the new dissolution upon the first, and left at the bottom of the Matras the Metals in powder, which the Regal-water could not dissolve, pour upon the dissolutions the liquor of Tartar, or the volatile Spirit of Salt Ammoniack, or of Urine, till ebullition cease, and that the most part of the corrosive Spirits of Regal-water, having quitted the Gold to unite it self to the fix'd Salt of Tartar, or to the volatile Salts of Ammoniack or Urine, the Gold precipitate to the bottom of the Vessel in a yellow colour, which must be wash'd in several Waters, till it be altogether insipid. By which means you will obtain a Fulminant Gold, very diaphoretick; but it must not be wash'd above once or twice, if you intend to preserve the purgative faculty which the Salts impart to this Gold. Dry this Lime of Gold with a moderate heat, and give it from three or four to five or six grains in some Conserve or Confection.

The violent and wonderful effects of this Fulminant Gold, oblige the Artist to great circumspection, as well in drying it, as in keeping and administering it. For the least fire taking hold of the volatile and combustible part of the Niter, which was contain'd in the Aqua-Fortis before it was regaliz'd, and offering violence to the strict union which the particles of the Salts have contracted with the Gold, causes them to give a greater bounce, and more violent then Gunpowder; whence follows a most fierce motion, that works its effect from the top to the bottom, by reason of resistance which the Gold there meets with. So that a few grains of this Fulminant Gold put into a silver-Spoon held over a fire, will make their way through the bottom, kindling into a flame, and making a great noise; and indeed one scruple of this Fulminant Gold shall give a louder bounce, and do more mischief than half a pound of the finest Gunpowder that is to be had. But this Fulmination is not to be fear'd when the Gold is given inwardly; for then the Salt particles which are mix'd therewith, and which make about the third of its weight, meeting with the acids in the stomach, and quitting the particles of Gold to unite to them, are not only disengag'd from the union which they had with the Gold, but so confus'd with the acids, and by consequence so weakn'd and fix'd, that they can do no farther violence, but leave the Gold its entire liberty to impart all its vertues. By the same reason, notwithstanding the dissolution of Gold in Aqua Regalis, the fulmination may be hinder'd by moist'ning the Lime of Gold with the Spirit of Vitriol, Salt, or Sulphur, before it be wholly dry'd, because the acid joining it self to the particles of Salts which were thoroughly united with the Lime of Gold, break the union, and hinder the violence which they would do one to another by taking fire. You may also after that dry the Lime of Gold over the fire, make it red hot in a Crucible, or melt it without any danger of Fulmination.

CHAP. XXXIX.

Of the Calcination of Gold by Inquart.

THE name of *Inquart* is given to this immersive Calcination of Gold, because there is mix'd with it three times as much in weight of try'd Silver, so that it makes up only a fourth part of the mixture. To which purpose having melted in a Crucible an ounce of Silver with three ounces of fine Silver, pour by degrees these two Metals melted together into a Copper-Vessel somewhat large and fill'd with water, to cause *Granulation*. For by that means they will fall in little Grains to the bottom of the Vessel. After which having well dry'd these grains, and put them into a Matrafs, pour upon them three times their weight in good strong water, and keep the Matrafs over a Sand-bath moderately hot, till the Silver be dissolv'd by degrees, and that the Gold be precipitated to the bottom in black powder. At which time, having pour'd out by Inclination the clear liquor that swims above the Gold into an Earthen-pot full of water, pour out again upon the Gold a little Aqua-Fortis to compleat the dissolution of that little Silver that may remain; then having pour'd out the last Dissolution by Inclination, and mix'd it with the former in the Earthen-pot full of water, wash the *Calx* or Lime of Gold with common water, and having well dulcify'd and dry'd it, make it red hot in a Crucible, where it will become very high colour'd, and fit to be either so kept or to be melted in the same Crucible, adding thereto a little Borax, and to be cast in a mold, by which means you will have a Lingot of very pure Gold.

Then put a flat bar of Copper into the dissolutions of Silver pour'd out and reserv'd in an Earthen Pipkin full of water. For by that means the corrosive Spirits of the Aqua-Fortis, quitting the Silver which they had dissolv'd, to stick to the Copper, the Silver will either fasten to the Copper-Bar, or precipitate to the bottom where you will find it, after you have pour'd out the over-swimming liquor by Inclination, which is call'd the second water. Wash this *Calx* or Lime of Silver, and having dry'd it, either keep it so, or melt it in a Crucible, adding to it a little Salt of Tartar, then pour it into a Mould greas'd withinside, and you shall have a Lingot of very fine Silver.

Then put a bar of Iron in the second water, and by that means the Corrosive Spirits of the Aqua-Fortis which had dissolv'd the Copper quitting that to stick to the Iron, the Lime of Copper will precipitate to the bottom, like the lime of Silver, where you shall find it, having pour'd the dissolution of the Iron into another Vessel. You may either wash and dry or melt the Copper, as you see requisite.

You may also precipitate the Iron, by pouring upon it some pieces of Calamine stone, or Zink, and precipitate those new substances by pouring upon them the liquor of Tartar or of some other fix'd Salt dissolv'd in water, and find their *Calx* at the bottom of the Liquor, and draw from the filter'd Liquor a Salt of Niter fit to make new Aqua-Fortis.

These Immersive Calcinations of Gold having occasionally engag'd me to speak of the Immersive Calcinations of other Metals, I cannot but give an account of the various effects which may be observ'd in the Dissolution or Precipitation of all these Metals. And first as to what concerns the Calcination of Gold by Aqua-Regalis, we must believe, that in regard that Gold surpasses all other Metals and Minerals, in purity, compactness, number and smallness of its pores, we must make use of a Dissolvent, whose points may be subtle and sharp enough to enter those pores, and divide the parts of the Gold. Which the Aqua-Regalis may very well perform. For the bigness and figure of the points of the water having been alter'd and sharpened by the mixture of the Salt Ammoniack, become thin enough to enter the pores of the Gold and to divide and dissolve its parts. But the fineness and sharpness of the points of the Aqua Regalis not affording force nor violence of motion sufficient to divide the parts of other Metals whose pores are larger, and consequently not to be fill'd by them, no wonder that it suffers the Silver to precipitate, not being able to dissolve it.

But

But the Fulmination of Gold dissolv'd in Aqua Regalis, and its effects downward, contrary to the nature of fire which tends upward, surprizes many that are not conversant in Chymistry. But I attribute the reason to this, that the Combustible parts of the Niter, contain'd in the Aqua-Fortis, which is the foundation of the Aqua Regalis, finding themselves mix'd with the acids of the same Niter, which are closely and reciprocally united with the Urinous Salt part, and the acid and fix'd Salt part of the Salt Ammoniac, as also with the fix'd Salt of the liquor of Tartar, or the volatile Salt part, which is us'd for the precipitation of Gold. I believe also that these Salts thus united, being deeply enter'd into the pores of the Gold, and retaining the nature of fix'd Salts, in that they long resist the fire, powerfully withstand all things that endeavour to separate them. So that the Union of these substances not having alter'd the inclination which certain particles of Niter have to take fire, these particles being violently agitated by the particles of Fire, which enliven them with some part of their Motion, they presently take fire, but while they strive to tend upward, they are hinder'd in their design by encountering the Salts fix'd and united with the Gold, and so are constrain'd to take that way which they can to make their escape, and forcing the Obstacles which they meet in their way, their effects prove much more violent then they would have been, had they been at liberty. So that the Pores of the Gold and those of the Salts being equal as well in their Center as in their Circumference, the Combustible parts of the Niter issue forth with the same impetuosity, and break all parts of the Gold alike, as well as of the Salts which kept them enclos'd. For though their force act downward, yet both the upper parts, and sides of the Gold would be brok'n, were the Gold shut up in a Box.

Some have attributed the Fulmination of Gold to the Ponderosity and compactness of the parts of this Metal. But though these qualities of the Gold do second very much the force of the Union of these Salts, and may be the cause of the Extraordinary noise which happens when the matters take fire; yet the Salts are the principal Agents in the Fulmination, which is plain by this, that you may make a Fulminating powder, by mixing three drams of good Niter powder'd with a dram and a half of Salt of Tartar, and a dram of Sulphur bruise'd together, heaping this mixture together in an Iron-Ladle and holding it over the fire: for so soon as the least particle of fire touches the least combustible part of the Niter, the powder takes fire with a violent Bounce, which however does not smite the Ear like that of Fulminant Gold. And though this powder act at the same time through the whole Circumference, nevertheless the Effect of the resistance of the Salt of Tartar is most considerable, because some powder shall make its way through the bottom of the Spoon if it be but thin.

As for the Effects of Aqua-Fortis upon Silver and not upon Gold, it is to be attributed to the largeness of the pores of the Silver, and the proportionable bigness of the points of the Aqua-Fortis, sharp enough at one end to enter, and large enough at the other to separate the parts of the Silver; but too big to enter the pores of the Gold, and consequently to make any division of its parts. As for the precipitation of the Silver by the bar of Copper put into its dissolution, and the effects of the same Aqua-Fortis upon the Copper, though weak'n'd by the water in the Pipkin whereinto the dissolution of the Silver was pour'd, we must impute them to nothing but the softness of the substance of Copper, whose parts are more slenderly united then those of Silver, and the conformity of the pores of the Copper to the points that remain in the Aqua-Fortis, though somewhat blunted by the dissolution of the Silver. The same reason serves for the precipitation of the Copper and the dissolution of the Iron, whose substance is still more soft then that of Iron; as also for the precipitation of the Iron and the dissolution of the Calamine-Stone. But as to the precipitation of the latter by pouring Liquor of Tartar or of fix'd Salt of Niter, that is to be ascrib'd only to the conjunction of the Corrosive acids of the Aqua-Fortis to those of the fix'd Salts, which is the ground of their incorporating with the Niter. By which may be seen the Existence of the inward form of Niter notwithstanding all the great alterations which the fire or the mixture of extrinick matters may have caus'd.

I omit the Calcinations immerfive of Gold in Aqua-Fortis reinforce'd with Bay-Salt or Sal-Gemma, or in Spirit of Salt well rectify'd, or in Glacial Oil of Antimony, or in other Corrosive Liquors, being unwilling to cloy the Reader.

CHAP. LX.

Of the Purification of Gold by Cementation, or by Antimony.

THE great affinity and resemblance, which Cement, made use of for the purification of Gold, has with Masons Cement, has occasion'd Writers to give this operation the name of Cementation. To which purpose you must bruise very fine three ounces of Brick, one ounce of Salt Ammoniack, as much Sal-Gemma, and as much common Salt, and having mix'd them together, well moisten'd them with Urine, and dry'd them in the air, reduce the ounce of Gold which you intend to purifie into thin plates; and having cut them into thin pieces fit to be put into a Crucible, proportionable to hold the Gold and the Cement, strow the bottom of the Crucible with a lay of Cement, and cover it with plates of Gold, the plates with Cement, and the Cement with plates, till you have cover'd all the plates with Cement, and that the uppermost lay of Gold be well cover'd. Then cover the Crucible with a Cover proportionable, which is to have a little hole in the middle, and having well luted the closures, leaving the hole open, put the Crucible in the midst of a Wheel-fire, which by degrees you must put nearer and nearer the Crucible, suffering the substances to evaporate through the hole. When you perceive no more smoak to come forth, stop up the whole, and encrease the fire from degree to degree for eight or nine hours, covering the Crucible all over with fire for two or three hours. Then setting the substances to cool, and having unluted the Crucible, take out the plates of Gold, which will be diminish'd in their weight by the consumption which the Cement has made of the other Metals mix'd with it; then having wash'd, wip'd, and melted them, pour out the Gold into a Mould, you shall find it there pure and separated from all other Metals, as also from the Silver, if any were mix'd with it; not being able to resist the corrosion of the Cement no more then the other Metals.

Gold is also purify'd by Antimony, after the following manner: Put an ounce of Gold into a sound Crucible, plac'd upon a Culot, in the midst of the Hearth-place of a Wind Furnace, and having kindl'd a good Coal-fire, make it red hot, then by degrees throw in four ounces of good Antimony powder'd, which melting presently causes the Gold to melt; keep the substances in fusion, till you see that no more sparkles fly out, by which you may be sure that the Antimony has consum'd all the extrinsick or alien substances that were mix'd with the Gold. At which time, having heated an Iron-Cornute greas'd within-side, pour the substances into it, and knocking the Cornute to make the Gold descend to the bottom; then letting them cool, and having separated all the *Scories* or scum of the Antimony, and other dross that may happen to be there, pour it again into the Iron-Cornute heated and greas'd, and you shall have a Gold very pure, of an excellent colour and fit for all uses.

You may also purifie Gold by the Cupel, by melting it with Lead, especially if it be mix'd with imperfect Metals. But because there is often Silver among the Gold, and that this purifying is then useless, considering that the Silver resists the Cupel, this sort of purifying is rarely made use of. And I shall speak of it only among the preparations of Silver, where it is proper.

But it is so easie a thing to have Gold exactly purify'd among the Refiners, or Mint-Masters, that I could willingly have spar'd my self the labour of setting down any preparation thereof; but I thought that in satisfying the curiosity of several persons, the discourses to which these preparations engage me, would not be displeasing.

CHAP. XLI.

Of Purifying or Refining of Gold by Mercury.

THE name of *Amalgama* is given to the mixture which is made of Metals with Mercury in a Mass soft and easy to be handl'd, of which they afterwards make a separation by calcining them together and causing the Mercury by Exhalation to quit the Metal, into the Pores whereof it had made its way. The *Amalgama* of Gold with Mercury is the most in use of all the rest and most considerable. To which purpose, after you have plac'd two little Crucibles in a wind-Furnace, and put into the one six drams of Mercury reviv'd with Cinnabar, and in the other a dram of Gold well purify'd beaten into thin slices, kindle a coal fire round about the Crucibles, and when the Gold is red-hot, and that the Mercury begins to smook, add the Gold and the Mercury together, stirring them with an Iron-rod. By which means the Gold and the Quick-silver uniting together will make an *Amalgama*, which you must pour into a dish half full of water, and having wash'd it and rub'd it in the water to fetch off the Dross, you shall have an *Amalgama*, gentle, soft, and unctuous in all outward appearance, which you must dry and press out in a Shamoy Skin, to fetch out the Mercury which may chance not to be *Amalgama'd*. Then you shall find the Mercury to weigh about half an ounce, the surplusage of the Mercury being exhal'd away by the fire or press'd through the Shamoy Skin; the Gold not being able to contain above three times as much as it weighs.

Some there are that would have you to put this *Amalgama* into a small Retort, and to draw off the Quicksilver with a soft and Gradual fire, and several times to repeat Amalgamation, drawing off the Quicksilver as often into a small Recipient fitted to the Beak of the Cornute; which will make the Gold very Spungy, and as they say, never capable for the future to unite again with the Quicksilver. But because there is no such thing certain, besides the toil and irksomeness of these preparations; the better way will be to put this *Amalgama* into a Crucible over a small fire, and to exhale, but not exalt the Quicksilver, as some would have it; and then to *Amalgama* the Gold which remains in the Crucible with new Mercury, reiterating the same operations three times. Then mingle and burn gently over the Gold six times one after another double its weight of Flowers of Sulphur, as well to open it the better, as to carry off all the particles of the Mercury that may be remaining. By this means you shall have a *Calx* or Lime of Gold the parts whereof will be perfectly divided, which you must wash and keep for use for the same distempers as Fulminant Gold.

You may yet for more perfection mix this *Calx* of Gold thus wash'd with three times the weight of Flowers of Sal-Ammoniack, well prepar'd and pulveriz'd, and having put them in a proportionate blind Alembick, sublimate them together in a Sand-Bath over a moderate fire; then having at several times wash'd off the Flowers of the Salt Ammoniack, and dulcify'd the Flowers of Gold keep it as one of the best preparations that can be made of this King of Metals.

CHAP. XLII.

Of the Calcination of Gold with Harts-horn.

THough the operation of Harts-horn seem not to be considerable upon Gold, especially if you mix it with the Gold after it is burnt, as the Authors of this preparation would have it done; and though we are to look upon nothing else but the separation which it makes of the Plates of Gold, between which it is put; we have however some reason to believe, that if we should permit the subtle and volatile parts of Harts-horn to act upon the Gold, to the utmost of their power, they would in some measure penetrate the parts, and very much contribute of themselves to its Calcination by fire. At least so long as they cannot alter the quality of the Gold, we may by making the best advantage of the good parts of the Harts-horn, conjecture that they have acquir'd some Exaltation, by the stay which they have made with the Gold, or else by some particles which they may have carry'd off in Distillation, according as follows.

Take half an ounce of Gold purify'd by Antimony, and having reduc'd it into thin Plates, and cut those Plates with Scissars into very little pieces, mix them with two pound of the shavings of Harts-horn. And after you have put this mixture into a large Cornute of Earth luted about, and plac'd it in a close Furnace of Reverberation, with a large Recipient fitted and luted to the neck, make your Distillation with a gradual fire, proceeding in all things as for the ordinary Distillation of Harts-horn. Then when the Vessels are cool, unlute the Recipient, and pour into a double glass bottle, all that is in it; then pour the Plates of Gold and the sediment of the Harts-horn into a Bason; and after you have separated the Gold, and mix'd them with two new pound of Shavings of Harts-horn, put the whole into a Cornute, and make a new distillation. Repeat these Operations a third time. Then having pour'd out the pieces of Gold with the sediment of the last Distillation into a pot fit to resist the fire, and luted on a fit cover, expose it to the heat of a Potters Oven for three days. Then when the substances are cool, having beaten the Gold and the *Caput Mortuum* of the Harts-horn together put them again into the pot that they may reverberate over a moderate fire for some hours, or till the whole have acquir'd a colour next to that of Bricks. After which separate by Lotions the harts-horn from the *Calx* of Gold which will keep at the bottom, and having dry'd it, keep it for your use.

In the mean time having mingl'd all the substances that remain in the Recipient, being the product of the three Distillations, and having put them into a Matrafs with a long neck, cover'd with its head, set them in a Sand-bath; and after you have fitted a Recipient to its neck and carefully luted all the jointures, make a Rectification thereof, as I have already shew'd for substances of the same nature. Thereby you shall have an Oil, and a volatile Salt, which at least will not be inferiour to those which are drawn from Harts-Horn without the mixture of Gold.

CHAP. XLIII.

Of Tinctures or Extracts of Gold.

YOU may extract a Tincture of Gold proceeding after this method. Take half an ounce of *Calx* of Gold well reverberated, very spongy, and of a brown red colour; and after you have put it into a Matrafs, and pour'd upon it Spirit of Wine well rectify'd, and strengthen'd with Salt of Urine, till it swim about three fingers above the *Calx*, lute the Matrafs Hermetically, and set it to digest upon a Bakers Oven, for a month, stirring the substances from time to time, or till the Tincture look

look as red as blood. After that open the Matrafs, and pour the Tincture by Inclination into a double glass-Bottle, and having well stopp'd it, pour upon the Lime of Gold, new Spirit of Wine enforc'd with volatile Salt of Urine; then after you have reluted the Matrafs Hermetically, reiterate digestion, which must continue as long as at first, repeating the Operation till the Menstruum cease to colour. Then having mingled and digested together all these Tinctures in a Matrafs cover'd with a Blind head, carefully luted, for ten or twelve days, pour them into a glass Cucurbit with a streight neck, cover'd with its head, with a Recipient fitted to it, carefully luted, and draw off with a very soft fire the greatest part of the Menstruum, which may serve also for the same uses; and you shall find at the bottom of the Cucurbit a Tincture of Gold very red, very much like Oil; which you may dissolve in all sorts of Liquors and give it from three or four to seven or eight little drops. You may also pour upon this Tincture concentr'd five or six times as much Spirit of Wine well rectify'd, and after some days digestion, draw it off again in a lukewarm *Balneo Maria*; and reiterate the same operations several times, to exalt the Tincture the more, to which you may give the name of Aurum Potabile, and look upon it as a remedy fit to give great relief in all Maladies that attack the Heart or Brain, or other noble parts. For it preserves the natural heat and Radical moisture, restores it when there is occasion, recreates the Vital and Animal Spirits, and restores and preserves the vigour of all the parts.

Quercetanus highly commends a Tincture of Gold; for the preparation whereof he digests Chalk of Lime with Vinegar distill'd, till the Menstruum be become very red, then having pour'd out by Inclination, and separated that Tincture; he returns the Vinegar upon the *Calx*, till no more Tincture will come forth. After that, having drawn off again in *Balneo Maria* the greatest part of the Menstruum, he pours upon the Tincture that remains at the bottom Spirit of Wine well rectify'd. Then having caus'd it to circulate for several days, drawn off the Spirit, pour'd new Spirit upon the Tincture, and repeated several times the same Operations, he finds a very red Tincture at the bottom of the Vessel.

Grullingius describes a Glass or Ruby of Gold, which he prepares, with half an ounce of Filings of fine Gold, or of Leaf Gold, and eight ounces of *Hungarian* Antimony powder'd, which he melts gently together in a Crucible; then having pour'd them into a Bason, and reduc'd them to very small powder, he calcines them a long time, as you calcine Antimony, when you would make Glass of it, till all the Sulphur of the Antimony be exhal'd. After which, having put some part of the powder into a little Crucible, and set the Crucible upon a Culor in a proper Furnace, he melts the Powder, and then pouring it into a Copper-Bason, he there finds the Gold in Glass of a Ruby colour, which he highly esteems for a gentle purger by vomiting; as also to cure the Dropsy and all other cold diseases: as also for an absolute remedy against the small-Pox and the pains of it. He commends it also against the Pestilence and other Epidemick Diseases; to purify the Mass of the blood, and ease the Gout; giving it from one to two grains. He draws also from these Rubies very finely powder'd a Tincture with the Spirit of Wine rectify'd, of which you may give two full spoonfulls, which never provoking vomiting, or loosening the Belly, most powerfully provokes sweating, cures the most desperate diseases, purifying the blood, correcting humours dispos'd to corruption, and causing the impurities of the body to transpire.

I shall only trouble the Reader with one more Preparation of *Monsieur Langelor*, Who having made him a Philosophical mill of well temper'd Steel, represented in the fourth plate belonging to this book, prescribes that after you have beaten the Gold very thin and cut it with a pair of Scissars into small pieces, to grind it in this Mill from morning till night for a month together, keeping the Mill cover'd with a Paper, to prevent any dust or dross from falling into it. When it is reduc'd to Atoms, he puts it into a Glass-Retort somewhat flat, as are usually those in *England*; and having plac'd it in a Sand-bath, and fitted a small Recipient to the beak, he forces this Gold with a Gradual fire at first, but at length very violent, till it distil in some very red drops. Then digesting them alone, or mix'd with Spirit of Wine Tartariz'd, they become a true Aurum Potabile, without any fear of the mixture of Alien substances. He affirms also that by grinding again the Gold which remains in the Retort, by reducing it into Atoms as at the first in the same Mill, and by repeating the same operations as often as shall be necessary, you may at length alter all the Gold into Liquor. And discoursing upon this preparation, he says that al-

though at first it seem but plain, and require great pains, if you consider it well you shall find it very rational, because he has several times experimented, that this way of grinding assisted by the natural disposition of Steel, of which the Mill is made, draws to it the admirable Salt of the Air, which insinuating by degrees into the pores of the Gold, hastens its dissolution; and that therefore this Mill is incomparably much better then all the Mortars of Glass, which are to be employ'd. This preparation has in it something so probable, that any person of curiosity and sufficiency would do well to make trial of it.

CHAP. XLIV.

Of the Preparation of Silver.

Silver has been always accounted a perfect Metal, because it comes nearest to the perfections of Gold of any other Metal, though in it self it be much inferior. The whiteness of the Internal Sulphur of Silver gives it its white colour, as the Internal redness of the Sulphur of Gold imparts its colour to that Metal. Silver in some measure is durable in the fire, but not so durable as Gold. For let it be purify'd never so fine, however it looses some part of its substance and weight, if you keep it too long upon the fire; nor can it long resist the Corrosion of the Salts, as we observe, when that being mingl'd with Gold, it is expos'd to Cimentation. For the Salts corrode it then as well as the imperfect Metals. Which is no wonder considering, that the Internal Sulphur, and all the parts of the Gold are incomparably more pure, more compact, and united then those of Silver which wanting digestion and perfection is much more porous, and those pores also wider, and much less able to resist the violence to which Gold is expos'd, with a luteament of quantity or weight. Which is the reason that Silver cannot be beaten out so far as Gold, and is sooner alter'd by standing in the Air, which changes its colour in a kind of a brown, red especially in damp places.

The natural Dross of Silver taken out of the Mine, or Artificially by Adulteration, force men to seek out ways to refine it. They make use of Lotions to wash off the outward and superficial dross, or else boil it in a Lye made of Tartar and Bay-Salt, according to the practise of the Gold-Smiths. But this lye however always dissolves some particles of the Imperfect Metals, which it meets superficially mix'd with the Silver, and also to corrode some particles of the proper substance of the Silver, but the quantity is so small, that the Gold-Smiths take no notice of it.

Immersive Calcination is not proper for the Calcination of Silver; for thereby the particles of Imperfect Metals, that are mix'd with the Silver, being also dissolv'd, we can never expect a perfect purity. The better way is to melt the Silver, and to throw among it at several times good Niter, and letting it bur; but neither this being able to refine it from all its Dross, we must be forc'd to make use of Lead, which is only able to consume and separate from Silver all imperfect Metals that may happen to be mix'd therewith, producing out of them a certain Scum of which I shall speak by and by.

CHAP. XLV.

Of the Refining of Silver by Lead.

THough the pores of Gold are much closer then those of Silver, and those of Silver much closer then those of other Metals, yet are they so dispos'd, that in Fusion the imperfect Metals that are mix'd with them, as you may observe in their Union for the time with Lead in the Coppel, or in the Alloy of the Mint Masters, this Union I say is not superficial as some have thought: for if it were, the Lyes which are made with sharp and corroding Salts; would be sufficient to carry off those imperfect Metals, and if their union were superficial, when they were melted together, there would be no need of Lead nor Antimony, nor any other means to refine Gold or Silver from all imperfect Metals wherewith they should be mingl'd. But we make use of Lead, because that being easy to melt, and easily melting those other substances which are mix'd with it, it thrusts it self at the same time into their Pores; and for that being, as it is compos'd of spreading Sulphury parts, and easy to evaporate it, unites it self without difficulty with those of other Metals proportionat to them, and forcing them to leave the pores of the Silver, still as the fire of the Coppel closes them, take them along with themselves either in Smoak or Scum. For if the natural closeness of the Gold or Silver hinder'd the imperfect Metals from entring in, and uniting themselves with them, as they do in Fusion, or that by Fusion alone and no other way it were possible to restore perfect Metals to their first condition, we had no need of any other assistance. But the impossibility of succeeding that way, and the advantageous experiments that have been continually made, are the reasons wherefore we make use of Lead.

They who have not all their conveniences for refining of Gold or Silver, do no more then place a good Crucible upon a Culor in the midst of a Hearth-place in a wind-Furnace, and having lighted round about it a good Cole-fire, they melt in the red-hot Crucible about four ounces of Lead; and when it is melted, they cast upon it an ounce of Silver, which presently melts among the Lead. Then they keep a good fire about the Crucible till the Lead and all the other imperfect Metals mix'd with the Silver are exhal'd in Spoke, or converted into Scum at the top of the Silver, which will remain pure, solid, and very white at the bottom of the Crucible. The *Scories* or Dross is call'd by the name of Litharge; for having serv'd to refine the Silver, they remain as hard as stones.

But they who have much Silver to refine, and are provided of Coppels, vaulted Lids, and proper Furnaces, perform their business with much more ease, and more effectually. For after they have plac'd a Coppel of a sufficient bigness in the vaulted *Moufle*, and the *Moufle* in a proper Furnace, they heat the Coppel red-hot by degrees in the *Moufle*, making a fire round about. They melt their Lead in the Coppel, and then the Silver in the Lead. Then keeping a good Coal fire round about the *Moufle*, they find at length the Silver alone purify'd, in a white and hard consistence in the middle of the Coppel, after the Lead and other Metals are separated in fumes and in *Scories*. However it is so common a thing to get pure refined silver, that there are few that will take the pains to Coppel it. Besides that the internal use of Silver is not so great for a man to find any profit in it by refining it himself.

I omit *Amalgamas* of Silver with Mercury, *Cimentations* with sublimate Corrosive, *Calcinations* in a Reverberatory, as neither necessary nor useful;

CHAP. XLVI.

Of the Dissolution and turning of Silver into Crystals.

THE Simple preparation of Silver is that of its dissolution and turning into Crystals; to which purpose they put in a Glass Cucurbit plac'd in a Sand-bath moderately heated an ounce of Silver refin'd by the Coppel reduc'd into grains or into thin slices, and having pour'd upon it three ounces of good Spirit of Niter, the subtle and penetrating parts of that Spirit being forc'd into a violent motion, and thereby very much heated, dissolve and pierce the whole body of the Silver. After which the Motion of the Spirits of Niter being in some sort ceas'd, the red vapours which appear'd at the top of the dissolution being dissipated, and the Vessels cool'd, pour out the clear Liquor by inclination into a Cucurbit, and having plac'd it in a Sand-Bath cover'd with its head, lute the closures, and fit and lute a small Recipient to the Beak, and draw forth with a moderate fire about three quarters of the Spirit of Niter which you made use of. Then letting the Vessels cool, unlute them, and you shall find at the bottom of the Cucurbit the Crystals of Silver, and at the top some part of the dissolution which was not Crystalliz'd, Which being pour'd out by Inclination into another small Cucurbit; you may evaporate again in the same Bath to the Pellicula, to Crystallize it in the Cold; or else you may dry it altogether upon the same Bath, and keep this Lime of Silver in a double glass bottle well stopp'd after you have dulcorated it by several Lotions, and thereby separated the most conceal'd parts of the Spirit of Niter.

As for the Crystals in the Cucurbit, after you have dry'd them well, keep them in a double glass bottle, to purge the brain from its superfluous humours, in Epilepsies, Apoplexies, Lethargies, &c. giving from one half to two grains, and not to eight or ten as some have prescrib'd, their effects being too violent, and their qualities too Castick to give so great a dose. The Spirit which shall have drawn off will serve to dissolve Quick-Silver. The Crystals of Silver are call'd Crystals or Vitriol of Luna.

CHAP. XLVII.

Of the Tincture of Silver.

PUT into a Matrafs an ounce of Silver, refin'd in a Copple, and reduc'd into thin plates or grains, and having pour'd upon them three ounces of good Spirit of Niter, place the Matrafs in a Sand-bath moderately hot, leaving there till the Spirit of Niter have very well dissolv'd the Silver. Then impregnating a pint of common water with as much Salt Marine as it is able to suck up, filter it into a clean Earthen-Pipkin, and pour upon it by Inclination the dissolution of the Silver, leaving at the bottom of the Matrafs that little feces which shall be settl'd there. By this means the Bay-Salt uniting with the Salt Sulphury volatile part of the Spirit of Niter, and the Salt fix'd part of the same Salt uniting it self to the acid of the same Spirit, this Spirit will certainly quit the Silver which it had dissolv'd, and suffer it to precipitate to the bottom. Which it shall be more and more forc'd to do, if you pour a good quantity of Fountain water, or River-water clear and strain'd through a fine Cloth, upon the substances. For the Spirit of Niter finding it self weak'n'd of all its parts, will leave all the particles of Silver which it had dissolv'd to precipitate to the bottom, without the necessity of any shog or thrust to be given by the Salt water to the Spirit of Niter, or to the Silver; since not all the shogs nor violences whatever that can be give to this dissolution, whither

whither with the hard or any more ponderous and solid substance then Bay-Salt, could ever do that, which the parts of the Sea-Salt do without shake or shog, by uniting themselves with the parts of the Spirits of Niter, whose pores they fill, while the pointed parts of the Spirit of Niter, enter reciprocally into those intervals which they leave. Of which you will be certainly convinc'd if you evaporate to the film, the liquor that swims above the Lime of Silver, after it is precipitated: for you shall find at the bottom of the Vessel a Crystalline Salt compos'd of Bay-Salt and Spirit of Niter, which united together just upon the precipitation of the Silver.

After this precipitation let the Lime of Silver settle, then having pour'd out by Inclination the clear Liquor that will swim uppermost, wash and wash again the sediment with clear water till it be perfectly edulcorated. After that having dry'd it, put it into a Matraass, and adding to it an ounce of volatile Salt of Tartar, and as much of the Salt of Urine, pour upon it twelve ounces of Spirit of Wine well rectifi'd; cover the Matraass with another lesser, instead of a blind-head, and having carefully luted the closures with a wet bladder, set the Vessel upon a Sand-bath, or upon a Bakers Oven, where you must leave it fifteen days or three weeks, stirring the substances from time to time, till the Spirit of Wine look of a fair Celestial blew colour: at which time having unluted the Vessels, pour out this Tincture by Inclination into a double glass bottle carefully stopp'd, and keep it for use as it is, or else having put it into a Glass-Cucurbit with a close neck, place in an evaporating Bath, and covering it with its head perfectly well luted, draw off about two thirds of the Spirit of Wine, and you shall find at the bottom of the Cucurbit the Tincture concentr'd, which you must put up as you did the first.

This Tincture is only a dissolution of some particles of the Silver which the volatile Salts of Tartar, and Urine have carry'd off, and were afterwards exhaled by the Spirit of Wine. However it is very much recommended in Apoplexies, Epilepsies, Vertigo's, Megrims, and other maladies of the brain, being taken in proper Liquors from five or six to twelve or fifteen drops. You may add to the Lime of Silver remaining in the Matraass the same quantity of the volatile Salts of Tartar and Urine, and Spirit of Wine rectifi'd, and having cover'd the Matraass again with a Blind-head, related the closures, and repeated the same stirrings and digestion, extract a new Tincture. After which you may make advantage of the *Gale* of Silver remaining in the Matraass, causing to melt and subminate a little, in a Crucible red-hot in the fire, an ounce of Tartar, one ounce of Flints in powder, four ounces of good Niter, and two drams of powder of Coal, and pouring these substances melted into a Mortar heated, afterwards when they are cold, having mix'd with the *Gale* of Silver as much as it weighs, and put the whole into a Crucible upon a melting fire, this Lime will resume its former body of Silver, which you make use of as before for any sort of preparation. The fix'd Salts of Tartar and Niter are here absolutely necessary, to hinder the volatility of the Salts of Tartar and Urine, wherewith the Lime of Silver was digested, and to fix the parts of those Salts, which have insinuated themselves into the pores of the Lime, and would otherwise carry away some part in evaporation. The powder of Coal and Flints serves to cause Fulmination, and to cause the volatile Spirits of Niter to exhale, which are opposite to the effects of the fix'd Salts, here requir'd.

Some there are who to good purpose extract a Tincture of the *Gale* of Silver with Spirit of Vinsal dulcifi'd with Spirit of Wine well rectifi'd, according to the method which I have deliver'd in its proper Chapter. Nor ought this Tincture to give place to many which Authors have imparted, the receipts of which might cloy the Reader. And therefore I shall add no more preparations of Silver more curious then necessary.

CHAP. XLVIII.

Of the Caustick Luna, or Infernal Stone.

Reduce four ounces of Silver refin'd to the height into Grains or Plates, and having put it into a proper Glass Cucurbit, pour upon it twelve ounces of good *Aqua-Fortis*; and having plac'd the Cucurbit in a Sand-Bath moderately hot, leave it there till the *Aqua-Fortis* have absolutely dissolv'd the Silver; and also if you think fit, having cover'd the Cucurbit with its head, and somewhat increas'd the fire of the Bath, draw forth about half the strong water to save it for some dissolution of Mercury. If not, having evaporated it half in the same Bath; and suffer'd the sediment to cool and crystallize, place a good German Crucible upon a Culot, in the mid'd of the fire-place of a small Furnace, and after you have kindl'd about it a small coal-fire, put into the Crucible one part of the dissolution of Silver, from which you must by little evaporate the most part of the Spirits of the *Aqua-Fortis*, adding thereto at several times all the other Crystals, moderating the fire for fear the substances coming to boyl, should run over and spill, and continuing it till the dissolv'd Silver become as it were dry in the Crucible, and that the red vapours of the *Aqua-Fortis* that you see rise, begin to cease. At which time increase your fire to melt the Silver, which after some few boylings will descend to the bottom of the Crucible, and when you observe a consistency like that of a thick Oil, take out the Crucible with a pair of tongs, and gently pour out the melted Silver into proper moulds, being heated before, and greas'd with candle-grease, where the Silver will coagulate into brittle stones of a blackish colour, which you must suffer to be half cold; then turn them out of the moulds upon a Table, and put them up in boxes, or proper vessels, so that the air may not come at them to soften the stone, and abate the quality of the Caustick.

This Stone speedily cauterizes the flesh or the bones upon which it is applied, provided you moist'n the end of the Stone, or the part upon which you would have it operate. And this effect must be attributed to the last spirits that remain in the pores of the Silver, and are petresied with it; which work more speedily, or more slowly, and with less violence, as they were dissolv'd with a greater or less quantity of moisture. We must not think however that the Silver dissolv'd in *Aqua-Fortis*, or in spirit of Niter, is only caustick, when it is petresied with the last spirits; because the crystals of Silver, of which the stones are made, are more caustick than the stones themselves; and that the simple dissolution of Silver in *Aqua-Fortis* burns with more speed and violence than the stones or crystals, as experience teaches. If the least drop chance to fall upon the hand; for it burns immediately, and very deep; if you do not wash the part to weak'n and carry off the Caustick Spirits of the *Aqua-Fortis*. Which is not to be wonder'd at. For besides that, the *Aqua-Fortis* has nothing in it hardly but what is caustick; the Salts are not able to act as they should, but when they are dissolv'd. We also find that the infernal stone does not burn at all but when it is wet. For that reason also the dissolution of the Silver in *Aqua-Fortis* burns more suddenly than the Stone, being not only liquid, but made so by the *Aqua-Fortis*, or by the spirit of Niter, which are caustick in all their parts, and able to act alone beyond the force of the ordinary water made use of to dissolve and force to action the salt parts of the infernal stone.

CHAP. XLIX.

Of the Preparation of Iron.

IRon, Copper, Lead and Tin, are call'd imperfect Metals, neither being so pure as Gold or Silver, and for that their parts are less compact, and less able to resist the violence of the fire. However Chymistry finds in them several good remedies, especially in Iron, though it be composed of Earth, Sulphur, and impure Salts, ill digested; and ill united. So that being exposed long to the fire, it turns by degrees almost all to dross; not being proof against the violence of the air, which penetrates and corrodes it in time. Iron is call'd by the name of *Mars*, whether employed for the making of weapons of war, of which *Mars* was said to be the God; or because of the influences which Iron receives from that Planet. We also give the name of Steel to that Iron whose substance being purified; and parts more compact, made so by putting the bars of Iron into a great fire for some hours among horns of Oxen, or of other Animals, and coals of Willow or Beech, which consuming the grosser impurities of the Iron, refine and close up the principal parts, after that by heating the bars red-hot, and quenching them several times in astringent waters or decoctions, which closes and renders the parts more compact.

The impurity of Iron is the reason that Steel is prefer'd before it in all preparations wherein that metal is made use of, and that we usually take the filings, especially those of Needles, as being most pure and most easie to be had; though I will not say but that sometimes we may prepare the Steel in Plates also.

We have been mightily puzzl'd from time to time to know, why men have attributed to Steel so contrary qualities, or at least very different in their effects, the one to open, the other to close. The difficulty to understand this has been the greater by coming to consider, that no distinct separation can be made of the parts of Steel, whatever art we can use. For in vain we promise to our selves either an Earth, or a Salt, or a Sulphur distinct; since that after all the preparations we can make, it seems to be equal throughout its whole substance, though it is apparent that its internal Salt and Sulphur have suffer'd some dissipation. And therefore since we cannot separate its various substances as we do those of Animals or Vegetables, it is in vain to attribute to its Earth an opening, and to its Salt an astringent virtue. For being united, and as it were inseparable, they cannot act but by consent, and receive jointly the good or bad impressions that may happen; so that according to all probability *Mars* never acts but according to the preparations which we make of it; or rather according to the various Juices, Acid, or Salt, volatile or fix'd, simple or compound, which it meets with in the stomach. For we often observe, that the filings of Steel, taken inwardly for some mornings together by persons of a strong constitution, have not only been dissolv'd in the stomach, but has open'd obstructions of the Liver, Spleen, and Matrix, which many other Medicines carefully prepar'd could not unstop. Which we should do ill to impute to the proper Salt of the filings of Steel, because its inseparable from all the other parts, but to the Edulcorating the acid or Salt juices in the dissolution which they have made of the Steel. For since we find by experience, that steel is not hard to be dissolv'd, and that not only the Tartar which abounds in Salt accounted fix'd and the acid Spirit of Sulphur, as also that of Vitriol, Bay-salt and Niter penetrate it and dissolve it almost equally, but that Wine and Water also penetrate and dissolve the filings; we have great reason to believe that the juices as well acid as Salt, or if you please of a midling nature, melting with the Steel in the stomach, fail not to fix to it and dissolve it; and that from this dissolution arises the liberty of the parts of the body upon which those juices operated, and their Reestablishment in their first condition, and their natural Function. Whence it happens that the stomach, the Intestines, and other parts are easily freed from the ill humours that oppress'd them, and that resuming their necessary vigour every one of those parts keep open, or shuts up its peculiar passages according to occasion. Not that we can attribute these opening effects to the Salt of Mars, no more then the binding quality to its Earthy part, since they are inseparable from the whole, and that to speak properly they are only fit to attend in the Stomach

Stomach the operation or effects of the acid juices which they may there meet with.

Nor must believe that the hardness and closeness of Steel beyond Iron, the pores whereof are bigger and more open, render it less proper for all sorts of preparations, since we see by experience that Spirit of Vitriol and raw Tartar, equally dissolve both the filings of Iron, and that of Needles, which are made of the finest Steel, and the best temper'd, and by consequence, the most compacted and close: and that the putting a Roll of Brimstone to a square piece of Steel sparkling hot out of the Furnace will make it melt like butter. In regard also that this hardness may be advantageous to stop and busy the dissolving parts of the juices which it may meet with in the stomach, and for that in truth the pure Metals are much better than those which are not so; for which reason all the best Writers have preferr'd Steel before Iron in all sorts of Preparations, and that if we were to seek for a distinct Salt in the Iron, it would be rather in that which is purify'd, then in the *Scories* or dross that is separated from it, which is nothing but the impurity of the Iron of which the Steel is made.

Now because the Union of the several parts of *Mars* is so strict, that they cannot be divided by any Art, and that they are always altogether in every part of the substance, which absolutely grants a great Stiptickness in all the preparations of *Mars*, and that the operation of this Metal must follow that of the acid or Salt juices, which dissolve it in the stomach, we should do ill to imagine that we are able to prepare a *Mars*, of it self truly opening or purely astringent. But that hinders not me from setting down here what preparations have been made of it. For without attributing to either any particular opening or astringent quality, preferable one before an other, I am perswaded that the more *Mars* is open'd by several Calcinations, it is so much the fitter to be dissolv'd in the stomach by the juices which it meets with, and to attend and second afterwards the effects of the same juices, and to fortify as it does at the same time all the parts.

CHAP. L.

Of Saffrons of Mars opening and Astringent.

THE most simple, most innocent and reddest Saffron of Mars, by Writers qualify'd for Astringent, is that which is gather'd from the Bars or Plates of Steel, expos'd a long time to the violence of the fire, and which is found upon occasion, upon the superficies of the Bars, which have for some time born the Retorts or other Vessels, in Reverberatory Furnaces. You may also spread the filings of Steel in a Capsula of Earth flat and broad, and having plac'd it in a convenient place in a Glass-house Furnace, keep them till they are become very red and very small. You may also mix the filings of Steel with their weight of Bay-Salt decrepitated and very finely powder'd; from which you may afterwards separate the Salt by several Lotions: then dry and put up this powder, giving it from half a Scruple to half a dram in an Egg, in some Conserve, or in some proper Liquor.

Saffrons of *Mars*, call'd Astringent, may be also prepar'd, by putting four ounces of filings of thin plates of Steel in a great Glass Cucurbit, cover'd with lute about half way and plac'd in a Sand-bath moderately hot, pouring upon them by degrees and at several times the quantity of about a pint of Spirit of Salt, Sulphur, Niter or Vitriol, or Vinegar, or if you please, *Aqua-Fortis*, leaving the whole together till the *Mars* be equally dissolv'd. Then having tak'n it off and colobated the Water three or four times upon the residue, or else the Spirits made use of; and forc'd the Distillation in the last place, till the residue, be absolutely dry; you shall find at the bottom the Steel of a brown red colour, which afterwards being expos'd to a fire of Reverberation for ten or twelve days, will become perfectly red: then having well wash'd it and dry'd it, keep it for your use.

The natural Astringtion of Steel, and that which the Dissolvants bequeath to it, may well in some measure give way to the Astringent quality which is attributed to it, as also impart to it some good success when it meets not in the stomach with those juices which can hinder its operation. But the effects of the Steel are not always the same; for this Metal meeting in the stomach with juices which are able to corrode and dissolve it, it is in some sort constrain'd to obey the operation, and second the qualities of the same juices. Nevertheless we must believe that being only alter'd by the dissolvants it does not loose all its qualities, by means whereof, it gives nature time to recover her strength; so that carrying off the impurities which it was burden'd withal, and restoring the necessary course and Circulation to the blood, the Vital and Animal Spirits, it reestablishes the Functions of all the parts, and gives them all the strength which they have need of for their preservation.

Notwithstanding the Manifest astringtion which is to be found in *Mars*, and in all its preparations: yet have several Authors made use of various means to prepare a Saffron of *Mars* which they call Aperitive. For sometimes they have mingled equal parts of powder'd Sulphur with filings of Steel, and having put them into an Earthen Pot sufficient to resist the fire, and the Pot upon a Colot in the middle of the fire-place of a proper Furnace, they environ'd it with lighted Coals and kept a good fire round about, stirring the substances from time to time with a long Iron-Spatula, till the Sulphur being consum'd, the Steel was become very red; after which they ground it upon Porphury to subtilize it. Sometimes they heated square pieces of Steel in a Smiths Forge, and when they were become as it were white in the fire and full of Sparkles; pressing it against great Rolls of Brimstone, they caus'd it to melt and drop into an Earthen Pipkin full of water; then having well separated the Sulphur, and finely powder'd the clots of Steel; they kept the powder of a brown colour, which some call'd black Aperitive Steel; which sometimes they have reverberated with Sulphur to make it look red, and to powder it more finely. Sometimes having sprinkl'd small thin plates of Steel with Spirit of Vitriol or Sulphur, and having expos'd them to the Air for four days; they have separated from them a whitish and sweetish flower; then continuing to sprinkle them, and separate the flower, and repeating often the same operations; the Pores of the Steel finding themselves more and more open, they have gain'd a good quantity of Flowers, which they call'd white Saffron of *Mars*. At other times they have only expos'd to the Sun or to the Air the thin plates of Steel, or else they have sprinkl'd those plates or filings with water; from whence they have afterwards separated the yellow rust by Lotion; driving it afterwards and keeping it so, or else reverberating it with Sulphur in powder to give it a red colour. All these preparations are almost of equal goodness and their effects may answer to the intentions of the preparer, which is to open; when the Acid or Salt juices which are in the Vessels, especially in the Stomach, abandoning the substances which they have fix'd, to apply themselves to the dissolution of the Steel, the same dissolution, not being able to fix them any more, serves to open the Passages; and carry off the separated humours of the Salts which have fix'd them.

As to the red colour which happens to Steel in diverse Calcinations, though it may be attributed to its internal Sulphur, yet we may more rationally impute it to the External Acids of the Salt, Sulphur; or Dissolvants; particularly to those of the fire, which insinuating into it's Pores, increase also its weight. In regard we find by experience that the red colour of Steel increases and hightens in the fire, if sprinkl'd with Spirit of Sulphur or any other acid. We see also that the fairest Reds are not highten'd but by acids, which in a moment will change a black colour into a very red one.

CHAP. II.

Of Salt of Mars.

THough we cannot boast our selves able to draw out any true Salt from Mars, and that all which we call Salt of Mars, has only the appearance, I think my self oblig'd however to say something thereof. This Salt is prepar'd generally by putting what quantity suffices of filings of Steel into a broad glass Platter, or in an Earthen Platter of Potters-Earth; where after you have moisten'd it with Vinegar, then dry'd it in the Sun, or over a very gentle fire, and ground it upon Porphyry, moisten it again with Spirit of Vinegar, then dry it and bruise it again, and repeat the same operations till the Steel be well impregnated with an acid sweetish savour. At which time having well ground it, and put it into a glass Cucurbit, in a Sand-bath, pour upon it a good quantity of flegm of Vinegar, stirring the filings well therein to facilitate the Dissolution of its parts, which the Spirit of Vinegar has corroded. Then having heated the bath by degrees, boil the substances for two or three hours, pouring in new flegm of Vinegar in the place of that which shall be consum'd. Then leaving the bath to cool and having filter'd the Liquor, evaporate it in a Glass Cucurbit in a Sand-Bath, over a moderate fire to the Pellicula or Film; and being cold, after you have pour'd by Inclination into another Vessel, the Liquor that swims above, separate and dry the Crystals, afterwards evaporating and Crystallizing the Liquor, till it be chang'd into Salt, which you must put into a Matrafs; and having there pour'd upon it Spirit of Wine well rectify'd, four fingers above the substances, cover the Matrafs with a blind head, and having well luted the closures, after a digestion of three or four days, draw off the Spirit by distillation over a gentle fire and keep the Salt for your use.

This Salt is compos'd of nothing but the Salt of Spirit of Vinegar, and such particles of Steel as the same Spirit has dissolv'd, which you may precipitate, if you pour upon the Dissolution the Liquor of Tartar or of any other fix'd Salt. However it is recommended by Writers for the opening obstructions of the Liver, Spleen and Matrix, as also for the cure of Dropsies; giving it from five or six to twelve, fifteen or twenty grains, in opening Liquors. But the sharpness which the distill'd Vinegar has given to this Salt, and the augmentation of Astringency which proceeds from thence, added to those other reasons which I shall give, assure me that the preparation of *Mars* which I shall produce, is far beyond this.

Get a pan of new Iron, thick, somewhat hollow, well beaten and smooth within, of an indifferent bigness, and setting it upon some Table or Cupboard in some convenient place, weigh out in a glass Bottle eight ounces of good Spirit of Wine, and as much Spirit of Vitriol well rectify'd, and having well mingl'd them, pour them out gently into the Earthen pan; then having cover'd them with a sheet of Paper, let them to stand for twelve or fifteen days, or till the two united Spirits have dissolv'd by degrees several particles of the proper substance of the Pan, and incorporated themselves therewith in a white Salt, enclining somewhat to grey, and till this Salt be dry'd and fix'd to the bottom and sides of the pan: whence you must take it off, and having beaten it to powder in a Marble or glass Mortar, stop it up in a Pot for your use, giving it from half a Scruple to half a dram, as one of the best remedies that can be drawn from *Mars*, and which may be truly call'd the Soul of the Liquor. This Salt may also pass for a singular Example of the change of the liquid formes of the Spirits of Wine and Vitriol into a solid, by their common Union with the particles of Iron which they have dissolv'd.

The Corrosion and Stypticity of the Spirit of Vitriol, being very much dulcify'd by the mixture of the Spirit of Wine; for that the parts of the one and the other changing figure and situation, are otherwise embody'd and confus'd one within another; and these two Spirits thus mix'd having penetration enough to enter into the *Mars*, and to dissolve a considerable quantity of its particles, which perfect the blunting the sharpness of those Spirits, and join themselves therewith to make up but one body; we must believe this Salt to be much more agreeable to the disposition of the stomach, and the various juices it may there meet with, than Salt of

Mars

Mars prepar'd with Spirit of Vinegar; considering that this Spirit furnishing the Salt not only with its form, but also with its first Matter, is that which operates the most in it; and that its own Corrosion and Acrimony, not being any way advantageous to the stomach, increase the natural Astringency of the *Mars*; so far it is from rendering it opening as the preparers pretend.

CHAP. LI.

Of Vitriol of Mars.

THE favour which is observ'd in filings of Steel to be Stiptick, and very like to that of ordinary Vitriol, together with the colour, figure of the parts and other qualities of Vitriol observ'd in Vitriol of *Mars*, sufficiently testify the nature of this Artificial preparation, which Authors have very truly call'd by the name of Vitriol of *Mars*. In regard that being only compos'd of the proper substance of *Mars*, and the distill'd Spirit of ordinary Vitriol, yet there are to be found in it all the marks and qualities of true Vitriol. But because the Spirit of Vitriol made use of in the Dissolution of *Mars*, is astringent and Corrosive, and that this last quality cannot but augment that which the *Mars* naturally has, we have no reason to believe that the Vitriol which proceeds from it, has of itself any opening faculties, but that being only apt to unite it self to Salt substances which may superabound in the stomach, and to blunt the sharpness thereof by opening the Passages; and expelling the ill humours that may follow afterwards, they are only the effects of the force of Nature, when she is freed from those obstacles, that trouble'd and disturb'd her Functions. We must consider also that this Vitriol is more apt to compress and close the fibers of the stomach and Intestines, and the Orifice and Inside of the Vessels through which it passes, then to relax or dilate them; though we may say that by compressing the Vessels on the one side, it may constrain them to open on the other, and to give way for the passage of the ill humours contain'd therein. All these circumstances oblige us to consider Vitriol of *Mars*, as a remedy rather Astringent, then capable to open obstructions of the Vessels, especially those that are inveterate and obstinate. This obliges me also to prefer the Salt of *Mars* last mention'd before this Vitriol; or some other preparations of *Mars* less Astringent and stiptick then this Vitriol.

But not to estrange my self too far from custom, and to satisfy others with it the good uses that may be made thereof, when there is any occasion to fortify and cleanse, or to mortify the Acrimony of the Salts, I will afford you the preparation. Put what quantity you please of the filings of Needles into a glass Cucurbit, and having well moisten'd and imbib'd these filings in good Spirit of Wine, plac'd the Cucurbit over a gentle fire in a Sand-bath, stirr'd the filings from time to time with a little Iron-Spatula, and suffer'd the Spirit to work for some time upon the filings, pour upon them hot water, some five or six fingers above the filings: then increasing the heat of the bath, let the substances stand and digest for 24 hours, and filter the Liquor through a sheet of coarse paper; which after you have put into another glass Cucurbit, over the same Bath, and evaporated the superfluous moisture of the liquor to a film, leave the sediment to cool and Crystallize. After which, having pour'd out by Inclination the Liquor that swims above the Crystals, and also separated, dry'd and put up the same Crystals, evaporate again the moisture of the Liquor to a film, to get all the Vitriol that remains. You may also moisten the sediment of the filings with new Vitriol, and leaving the Spirit to operate for some time upon the filings, and having pour'd more water upon them as at first, repeat digestion; and all the foregoing operations to compass the greater quantity of Vitriol of *Mars*.

Some mix the Water with Spirit of Vitriol before they pour it upon the filings. But their dissolution not being to be effected in a small time but by the Spirit of Vitriol, and this Spirit of Vitriol acting with more force when it is alone, then when weakened by the water, it is much more to the purpose to begin the dissolution of the Steel with that; and repeated experience has often shew'd me the good success of it, as well

for the beauty as the quantity of the Vitriol which I have had; the addition of water serving only to soak and separate the parts of the Steel which the Spirit of Vitriol has dissolv'd, from those which it has not.

You may have a very beautiful Saffron of Mars, by calcining this Vitriol in a Crucible in an open fire, till it be reduc'd into a very fine red powder, which is properly that part of the Steel only which the Spirit of Vitriol has dissolv'd.

Vitriol of Mars is never giv'n but from three or four to twelve or fifteen grains at most, mixing it in proper liquors.

Vitriol of Mars may be also distill'd through a Retort, observing the same method as for ordinary Vitriol, and the Spirit drawn off made use of for the dissolution of the Steel. After you have so done, you shall find at the bottom of the Cornute, the substance of the Steel in somewhat red powder, which will be the true Saffron of Mars.

CHAP. LIII.

Of Tinctures of Mars.

THE hardning and compacting the parts of Iron, when it is turn'd into Steel, do not take from it the aptness which it has to be penetrated and dissolv'd, not only by corroding Spirits, and by volatile and fix'd Salts, but also by Dew, by Wine, and ordinary water, provided that being in small filings, the liquors are allow'd their due time to penetrate and dissolve the parts. For though that neither Wine nor Water can totally dissolve Steel, nor operate upon it with that force and speed as the Spirits and corroding Salts, nevertheless they are able to dissolve a considerable quantity of its parts, of which the Steely savour tasting of Vitriol, and the brown colour which happens to them are assured symptoms.

The Water wherewith the filings of Steel are moisten'd, penetrates the superficies, and converts it into rust, which you may afterwards dissolve in a larger quantity of Water, and change it into a yellow tincture, very serviceable. But if you infuse the filings of Steel in cold weather in White-wine enclining to green, for some weeks, putting them both together in a double glass Bottle well stopp'd, the acid of the Wine united with its volatile Salt, will make a larger dissolution of the parts of the filings, and colour the Wine very brown, which you may give to good purpose from half a spoonful to one or two spoonfuls in the morning fasting, and continue the use of it for many days against obstructions of the Liver, Spleen, and Matrix; or else make a Syrup thereof with fine Sugar, to take from half an ounce to one or two ounces at a time. But because it requires a long time to dissolve Mars in any of these menstruums, we must use other means, to which purpose there is a tincture to be thus prepar'd:

Beat to fine powder two pound of fair Tartar, and having mix'd it with half a pound of filings of fine Needles, put them together into a large Kettle, which must be fill'd almost quite full of water, and setting the Kettle over the fire, make the substances boil, stirring them from time to time, especially at the bottom, to facilitate the dissolution of the Mars, adding still more water, as the water of the dissolution boils away. Continue this boiling for ten or twelve hours, or till you perceive that the filings of the Steel are almost dissolv'd in the liquor, which will be of a brown colour when it is filter'd and separated from its sediment, though the sediment retain a whitish grey colour, which the substances hold all the while they boil. Then having taken the Kettle from the fire, hold it sideways, that the liquor may filter through languets of Cloth ready provided; which done, leave the substances to cool for four and twenty hours. Then having moisten'd and gently press'd the languets, dipp'd one half in the liquor, and the other half out, so that the water that trickles down the languets may distill into an earthen Pipkin, give the liquor time to filter of it self, enclining the Kettle more and more as it empties. This operation is somewhat long, and requires two or three days time. But by this means you shall have a tincture of Mars very clear, though of a brown red colour, and a lowre taste like that of Vitriol. When this tincture is almost all filter'd, having

having wash'd the Kettle, put it in again, and evaporate the superfluous moisture over a very gentle fire, till it be well concentr'd and reduc'd to the consistence of a Syrup somewhat liquid, and when it is cool put it up into a double glass Bottle well stopp'd; it is to be given in the morning fasting, from one dram to two, in proper liquors, continuing the use from time to time as occasion serves.

In the preparation of this tincture we are to observe, that the acid Salts, and those that are purely salt, dissolve Steel with equal force. Observe also, that Mars this dissolv'd is in a fitter condition to be convey'd to the parts that have occasion for it, then that which cannot act unless dissolv'd by the Stomach; and that having been dissolv'd by an acid saline Salt, and by consequence of a minding nature, it may be able to remedy more effectually the disorders which the ill humours have produc'd; for this tincture is so much the more able to open the obstructions of the Vessels, by reason of the assistance which it receives from the acid saline Salt of Tartar which has dissolv'd the Mars, and which without diminishing the good qualities which the Mars has to strengthen the parts through which it passes, enforces it to obey its operation, by softning the matters that stop the passages, and by carrying them off by the ordinary ways, and by re-establishing nature and all its functions, to restore that health to the parts which they stood in need of.

You may pour good Spirit of Wine upon the Saffron which remains after the distillation of the Virriol of Mars, and extract its tincture in a Sand-bath moderately hot; then having filter'd it through a piece of course paper, and drawn off, in *Balneo Maria*, about three fourths of the Spirit of Wine, keep the tincture concentr'd, which remains at the bottom of the Cucurbit; the dose of which is from seven or eight to twelve or fifteen drops, in some proper liquor. This tincture is principally commended for the cure of the Dropsie, which comes from the relaxation of the Lymphatick Vessels, which extravasate and spill the serosities over the whole habit of the body. For this tincture closing the orifice of those Vessels, enables them to void the Lymphatick humour by the ordinary ways, not suffering them to overflow the other parts.

You may also dissolve the filings of Steel in very strong Vinegar, and afterward evaporate the greatest part of the moisture of this dissolution, then extract the tincture of it with good Spirit of Wine; afterwards having filter'd and concentr'd it, keep it for the same use as the preceding one. But it must be lookt upon as far more astringent, in regard the natural astringency of the Steel is augmented by that of the Vinegar which dissolv'd it.

Some having put the filings of Steel into an Iron Pan, moist'n it with good Vinegar, and dry it over the fire, stirring it often with an Iron Spatula, repeating these operations several times; then they lay these filings for some days to macerate in good Spanish Wine, stirring them from time to time, and having filter'd the liquor, keep it for their use. I omit several other tinctures, the description whereof seems to me altogether unnecessary.

CHAP. LIV.

Of the Extracts of Mars.

ALL the tinctures of Mars may be easily turn'd into Extracts, thick'ning them by degrees over a gentle fire to the consistency of an Extract. But other Extracts of Mars may be also made in manner following: Mix equal parts of Saffron of Mars reverberated with Sulphur and Salt Armoniack in powder, and having put them into a glass Cucurbit, plac'd in a Sand-bath, and cover'd it with its head carefully luted, make sublimation thereof in a gradual fire, and by this means one part of the Saffron of Mars mix'd with the Salt Armoniack, will mount in yellow flowers, which you must grind and mix afterwards with the Settlement, repeating six or six times the same sublimation and mixture with the Settlement, or so often till the Saffron of Mars be almost all ascend'd with the Salt Armoniack in flowers; then having put these flowers into a Matras, and pour'd upon them Spirit of Wine well

well rectify'd, four fingers above the substances, cover the Matraſs with a Blind-head carefully luted, then ſet it over a Sand-bath over a fire of digeſtion, which muſt be continu'd twelve or fifteen days, ſtirring the Ingredients from time to time to haſten the Extraction. Afterwards the Tincture being colour'd, filter it, and having, if you think good, drawn off the moſt part of the Spirit of Wine by the moſt gentle and ordinary ways, evaporate by degrees the ſuperfluous moiſture to the conſiſtence of an Extract. Which may be taken alone from half a Scruple to a whole one, or mix'd with Opiates, or other opening and purging Medicines.

You may alſo prepare an Extract of *Mars* very plain, by putting into a Matraſs a pound of filings of Needles, and pouring upon them juice of Grapes newly preſs'd forth, and unfermented, about five or ſix fingers above the ſubſtances, then having cover'd the Matraſs with a Blind-head, exactly luted, and plac'd it in a Sand-bath or over a Bakers oven, you muſt ſtir it from time to time, but let it there ſtand for forty days, or till the Grape juice be of a very dark colour. Then having filter'd that Liquor through a courſe piece of paper, and put it into an Earthen pot well glaz'd within, evaporate the ſuperfluous moiſture over a gentle fire, till the Tincture be as thick as an Extract, of which you may make the ſame uſe as of the foregoing. But becauſe as well Extracts as other preparations of Steel are generally accompany'd with the natural Aſtriction of that Metal, it is good to mix them, at leaſt to let them precede or follow ſome purgatives, which may aſſiſt them to open the paſſages.

With much more facility you may prepare an Aſtringent Extract of *Mars* by infuſing the filings of Steel for ſeveral days, and afterwards boiling them in ſtrong Wine squeez'd from the Grape-preſs, or elſe in juice of Barberries, or in any other Aſtringent juice, filtering afterward this Liquor, and reducing it by ordinary ways to an Extract, which may be giv'n to good purpoſe from half a Scruple to half a dram, againſt all weakneſſes, and want of retention in the Stomach and Inteſtines.

CHAP. LV.

Of the Preparation of Copper.

Several Writers will have it, that an undigeſted Sulphur, a red Salt, and a yellow Mercury, are the matters that make up the Compoſition of Copper, affirming it however to be a difficult thing, to make a true ſeparation of the Principles of this imperfect Metal, to which they have alſo giv'n the name of *Venus*, by reaſon of its Sympathies with that Planet, and the particular cures, it affords to the parts of Generation.

Sometimes the Filings are calcin'd, or the thin plates of Copper alone, in a Furnace of Reverberation. Sometimes the thin plates are lay'd in Stratification between decrepitated Salt beaten to powder, in a Crucible or ſome other Veſſel able to withſtand the fire, then quenching theſe thin plates in water, and having cleanſed them well with Iron Bruſhes, they are to be ſtratiſy'd again, repeating theſe operations three times, by which means you ſhall have a very red Saffron of *Venus*, which it will be ſufficient to waſh well, and keep in fine powder, for Emplaſters, and other External remedies for the cleanſing of Wounds and Ulcers.

There is another Immorſive Calcination of Copper, by diſſolving it in Aqua-Fortis or in Spirit of Niter, or in ſome other corroding Spirit. Then having drawn off the Aqua-Fortis or other Corroding Spirit by Diſtillation, you ſhall find the Copper at the bottom of the Veſſel in a red powder, which muſt be waſh'd, dry'd, and kept for uſe. Or elſe you may precipitate the Diſſolution by putting in a thin Plate of Iron, and pouring hot water upon it, which will enforce the Diſſolvent to quit the Copper which it had diſſolv'd, and ſo let it fall to the bottom of the Veſſel in a red powder, which is to be kept as a true Saffron or precipitate of *Venus*.

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You may cut into pieces thin plates of Copper, and having stratify'd them in a great Crucible with equal parts of Sulphur in powder and cover'd the Crucible with his cover having a little hole in the middle, lute the jointures round about, and having left the Lute to dry, place the Crucible upon a Culot, and light a wheel fire round about it a distance enough to melt the Sulphur, keeping the fire thus for an hour, then put the fire nearer and nearer by degrees till the Sulphur take fire, and that the flame flash out of the cover of the Crucible. By this means the Sulphur being consum'd, and the substances cool'd, you shall find the plates of Copper at the bottom at it were swell'd, dark colour'd and brittle as *Aes ustum*, which you may reduce into powder, that will be also a Saffron of *Venus*, only for outward applications.

There is also another Calcination of Copper much less violent, and only superficial, by moistning the Copper plates with corroding Spirits, or with Salts dissolv'd in water, by which means you extract a Verdigrise which appears upon the superficies of the Copper-Plates. You may also extract a Verdigrise by means much more gentle in hot Countries, and particularly at *Montpelier*, by putting a little Wine at the bottom of certain great Earthen pots narrow below, ranging above the Wine upon little Sticks, or pieces of Clay the plates of Copper, and stratifying them with the lees of Grape Clusters, moisten'd before with the same Wine, covering the pots afterwards, and leaving them in a cool place for seven or eight days, or till the superficies of the Plates be well cover'd with Verdigrise; which you must scrape off with knives, reiterating afterwards the same Stratification, and leaving the pots as before to get a greater quantity of Verdigrise: which some call the Flower, others the Vitrioliz'd Salt of Copper, though it be indeed the proper substance of the Copper dissolv'd by the volatile acid Saline Spirit of the Lees of the Grape-Clusters, assisted by the VVine and the secret Ferment of the one and the other.

CHAP. LVI.

Of the changing of Copper and Verdigrise into Vitriol.

After you have plac'd a great Crucible upon a Culot in the midst of the Hearth-place of a VVind-Furnace, grind to very fine powder upon Porphury, a pound of Saffron of *Venus*, and having mix'd with it the eighth part of its weight of powder of Sulphur, put this mixture into the Crucible, round about which kindle a moderate fire of Coles, continuing the fire till the Sulphur be wholly consum'd; taking care in the mean while to beat over again the substances, in case they clot together in the Crucible, during the operation. After which, the substances being cold, mix with the same Saffron as much Brimstone powder'd as before; and having return'd this mixture into the Crucible and kindl'd the fire, do as you did the first time, repeating the same operations, ten or twelve times, to open the Copper perfectly, and make fit to be dissolv'd. At length the Saffron being cold, after you have ground it very fine upon Porphury, put it into a glaz'd Pot of Potters-Earth, and set it in *Balneo Maria* moderately hot, where having first moisten'd it, then steep'd it in a good quantity of Rain or River VVater almost boiling hot, stirring it from time to time; macerate the substances, continuing still to stir them till the water look blew. Then having filter'd and put this Tincture into a Glafs Cucurbit plac'd in a Sand-bath, and having evaporated the superfluous moisture to the film, when the Ingredients are cold you shall find at the bottom of the Cucurbit the Crystals of *Venus*, having first separated by Inclination and pour'd in to another Cucurbit the Liquor that swims above the substances, which you must evaporate and Crystallize as before, till the whole be Crystalliz'd.

Some may wonder that the Saffron of *Venus* dissolves so easily in the VVater, in regard the proper substance of Copper contain'd in its Saffron, how exactly soever it be calcin'd or reverberated does not give way to such a feeble Menstruum as wa-
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ter. But that will be easily manifest, when we observe that the Acid of the Sulphur having corroded, and in part dissolv'd some particles of the Saffron of *Venus*, during its Calcination, and being in some sort incorporated with it, the water almost boiling hot easily dissolves it, and with it the parts of the same Saffron half corroded and dissolv'd before. So that the Vitriol which you draw from thence, is properly compos'd of nothing but the Acid parts of the Sulphur, and those of the Saffron of *Venus*, which the same Acid of Sulphur had open'd and dispos'd to be dissolv'd with it in the water.

This Vitriol of *Venus* is given from two or three to twelve or fifteen grains in proper Liquors, against diseases of the head, stomach, and parts of generation; for the cure of which it is often us'd in injections, mixing a dram of it in a pint of juices, decoctions, or distill'd waters proper for that purpose. It is also good to kill Worms.

But because the boiling water cannot dissolve the whole substance of the Saffron of *Venus*, put the sediment into a Glass Cucurbit, and pouring distill'd Vinegar upon it, about four good fingers above the substances, make a Maceration thereof in a Sand-bath moderately hot, till the distill'd Vinegar look blew; then pour out the Tincture by Inclination, and keep the Tincture in a vessel apart; after this pour more Vinegar, and repeat the same Macerations and Operations till the spirit cease to colour. Then having mingl'd all the Tinctures, evaporate and chrySTALLIZE them, as you did before, and dry and keep the ChrySTALS.

The Vert-degrise being much more open and better digested than the Saffron of *Venus*, is also sooner and more easily dissolv'd. To which effect having put three or four pound of Vert-degrise powder'd into a Glass Cucurbit plac'd upon a Sand-bath, temper it by degrees in good spirit of Vinegar, stirring it with a wodd'n Spatula, and pouring the Wine upon it, till it swim above the Verdigrise five or six fingers. Then kindle and keep a moderate fire under the Bath, and let all the substances macerate, till the Vinegar look of a dark green colour. After which having filter'd and set apart this Tincture, pour more spirit of Vinegar upon the sediment of the Vert-degrise, and repeat Maceration and other Operations till all the pure part of the Vert-degrise be dissolv'd in the spirit of Vinegar. Then mixing all these Tinctures together in a large Glass Cucurbit plac'd upon the same Bath, kindle a moderate fire underneath, and evaporate by degrees the superfluous moisture, which will be little else but the Flegm of the Vinegar; for its Acid part will incorporate with the Vert-degrise, and augment its quantity, notwithstanding the scætes that will remain in the Filter, or at the bottom of the Cucurbit, which one would think should diminish the quantity of the ChrySTALS. Evaporate the moisture with a very moderate heat, till the film arise; after which when the matters are cold, having pour'd by inclination the liquor that swims above the ChrySTALS into another Cucurbit, and gently dry'd and set apart the same ChrySTALS, replace the Cucurbit in the same Bath, and repeat Evaporation and ChrySTALLIZATION as often as shall be thought requisite, for the saving of all the ChrySTALS that shall be drawn from that Tincture, that shall be of a blew colour.

They that would augment the Acidity of those ChrySTALS of Vert-degrise, with a design to draw forth a good spirit, fit to dissolve several Mineral substances, dissolve these ChrySTALS in new spirit of Vinegar, filter the Dissolution, and having evaporated the superfluous moisture to the film, they separate the ChrySTALS, reiterating the same addition of spirit of Vinegar, and all the other operations, so long, till having cover'd the Cucurbit with its head, and evaporating the dissolutions, the Vinegar distill forth, as strong as when it was first put in to dissolve the ChrySTALS; and that you may thereby judge that all the pores of the substance being altogether fill'd with the Acid parts of the spirit of Vinegar, it cannot be any more impregnated.

CHAP. LVII.

Of the Distillation of Crystals of Venus.

BEfore you undertake to distill the Crystals of Saffrons of Venus, or those which you shall have drawn from Vertdegrise, you must, after you have put them into a glass Cucurbit, pour upon them Spirit of Wine well rectify'd four fingers above the substance. Then having plac'd the Cucurbit in a Sand-bath over a very gentle fire, cover'd it with its head well luted, and fix'd to it a little Recipient luted after the same manner, draw back the spirit of wine, and return twice more other spirit of wine upon the Crystals, to qualifie their Acrimony in some measure. Then having dry'd and beaten them, fill about two thirds of a great glass Retort environ'd with lute, and having plac'd it in a close Furnace of Reverberation, and adapted and carefully luted a grand Recipient to the neck, distill the spirit with an immediate fire gentle at first, then encreas'd by degrees, and from degree to degree, and continuing it till no more vapours rise out of the Cornute; then when the vessels are cold, put the Residence into a new Cornute environ'd with Lute, and having pour'd the distill'd spirit in the Recipient upon it, and plac'd the Retort as before in a close furnace of Reverberation, and fitted and luted a Recipient to the neck, reiterate Distillation, as also Cohobation of the spirit distill'd upon the sediment, and make a third Distillation. By this means you shall have a spirit impregnated with the most essential parts of the Saffron of Venus, or of those of Vert-degrise, recommended by several good Authors for a specifick against the Epilepsie, Apoplexie, Convulsions, and other maladies of the brain; as also against those of the matrix. They also esteem it highly against the Jaundise, weakneses of the stomach, and to break the stone in the Reins and Bladder. Against all sorts of Agues, the Pestilence, and that it may be successfully used instead of the Prophylactick water of *Sylvius*, in all diseases for which that is commended. Inasmuch that *Paracelsus* avers that this spirit makes the fourth part of an Apothecaries shop. The dose is from five or six to ten or twelve drops, in proper liquors. It is us'd in ointments to make the hair grow, and to cure the Itch, Scurf, and Scald-heads.

But besides all these virtues, they pretend that it is a real *Alkalest*, able to dissolve totally all Pearls, Corals, Crabs-eyes, and other such kind of substances, with much more ease than any other dissolvants, which altering and destroying themselves in some measure, while they act upon the substances that they dissolve, leave great impressions of their Acrimony; and with that the most part of their Acidity. Whereas if you believe them, after this Spirit has dissolv'd all sorts of substances, it quits them altogether, when it is forc'd out by distillation, issuing out with the same strength which it had before distillation, and is still in a capacity to dissolve more, and as often as you can desire. But because the salt part of these substances is sure to retain with it some part of the Acid, with which it may have united it self, and that besides this, the terrestriall part fixes and detains some other particles, which cannot well be separated but by Lotions, it is not to be thought that this spirit is always the same. Nor do I find the use of it very necessary for those dissolutions, because for reasons elsewhere alledg'd the Magisteries of Pearls, Corals and such other kind of substances, are much inferiour, and of less use then the substances themselves ground to a very fine powder upon Porphyry; and that the apparent salt which a man might draw from them causing this spirit to incorporate with the substances which it has dissolved, would prove more sharp then that which should be drawn from the same substances with Vinegar distill'd, and the Acid Salt would be also incorporated with the substance which it has dissolv'd. We should deceive our selves also to let Copper, Iron, Pearls, Corals, &c. pass for pure *Alkali's*, upon this ground that Acid spirits act upon them. For though these substances are not destitute of their proper *Alkali*, it follows not that this part is the whole; nor that it can transform the other parts into it self, since that when the Acid spirits dissolve those sorts of substances, they do it not by uniting themselves to them, as they do with the true *Alkali's*, but by destroying them by the division which they make of their parts, quitting them, and suffering them to precipitate downward, when they meet

any fix'd or volatile Salt with which they may unite, considering that only salt substances dissolvable in water, and capable to unite and incorporate themselves with the oils, which can be accounted real *Alkali's*. For though the boiling water, as I have said, may make some dissolution of Copper reduc'd into Saffron, after it has been calcin'd with sulphur, nevertheless it can only dissolve that part which the Acid of the sulfur has corroded and half dissolv'd during Calcination.

Some have pretended to draw forth a sulphur of *Venus*, by mixing its Vitriol with half its weight of filings of Steel, moistening them several times with Vinegar distill'd, drying them full as many times, and at length reducing them into a red mass, over a gradual fire augmented toward the end. After which they bruise the Mass in a Mortar, and extract the Tincture by the usual waies with Vinegar distill'd, which they afterwards evaporate to the half part; then pouring upon it liquor of Tartar, they precipitate a substance which they call by the name of Sulphur of *Venus*; though indeed it be nothing else but the proper substance of the Copper, which lay hid in its Vitriol, and that portion of filings of Steel, which the distill'd Vinegar had dissolv'd, when it was us'd for the extract of the Tincture. But this preparation, in my opinion, having more of vanity then profit, I think it to no more purpose to dilate any more upon it. No more to purpose do I think it to multiply any more preparations of Copper, believing that if those which I have given will not satisfy, to all intents the curious may have, they may find by their own progresses, or by the several preparations which I have given upon *Mars*, whatever is necessary to be practis'd upon Copper.

CHAP. LVIII.

Of Preparations of Lead.

L EAD is not only put into the last rank of imperfect Metals, but has been alwaies accounted the courtest, most terrestrial, coldest, softest, and most easie to melt of all Metals. It is thought to be compos'd of a terrestrial Salt and Sulphur, and an imperfect Mercury, somewhat of the nature of Antimony. It is call'd *Saturn*, from the influence which that planet has over. Particular qualities are ascrib'd to it also, for the cure of diseases of the Spleen, and Head, because there is alwaies some portion of Silver mix'd with it in the Mine. Its Terrestrial Salt and Sulphur are the reason, that being melted, it mixes it self with all Metals, and that being expos'd with them to the violence of the fire, it reduces all imperfect Metals into dross and scum. The same Sulphur is the reason that being reduc'd into Lime and poudr'd, it easily unites with all sorts of unctuous matters. For which reason it is often made use of in ointments and emplaisters, with which it incorporates very well. The imperfectness of its substance hinders however, but that both Pharmacies make several preparations of it, and that it is more us'd than all the other Metals together.

The meanest and most simple preparation of Lead is that of its purifying. To which purpose, having melted it in a convenient Earthen Pot, or in some great Iron Ladle, and thrown upon it some pieces of Suet or Wax, let them flame together, and the flame being pass'd, scum off the impurities. You may also keep it a longer time over the fire, and throw in more pieces of Suet or Wax, and still separate the scum that rises; but all the Lead would turn into scum, should you continue to hold it over the fire, burning more Suet or Wax upon it. And therefore once burning, and once scumming is enough, and then to pour it into some vessel half full of hot water, to have your Lead sufficiently pure, and fit for any other preparations which you intend.

Having thus purifi'd your Lead, if you would calcine it into a grey Calx, you may keep it over a moderate fire in the same vessel, stirring it continually with a long Iron Spatula, and separating from time to time the grey Powder inclining to yellow, which will gather together; still keeping it upon the fire, and separating the Powder till the Lead be changed into that kind of Calx or Lime.

Afterwards quench this Calx in some flat Earthen *Capsula*, and placing it in a proper

per Furnace of Reverberation, kindle and keep a moderate fire, not to melt the Lime, which must be left to reverberate for some hours, till it becomes yellow, which the Painters call *Maciet*; or of an orange colour, enclining to red, which they call *Minium*.

You may also reduce the Lead into thin Plates, and having hung them up, let them receive the vapours of Vinegar put into a proper vessel over a moderate fire, and afterwards separate the white substance that will gather together, which is that which they call *Ceruse*. Or else melt the Lead in a Crucible, and having mingled with it the half of its weight in powder'd Brimstone, leave it upon the fire, till the Brimstone be all consum'd, at what time you shall find the Lead in a dark colour'd Powder, which is call'd *Born Lead*.

I leave apart the Calcination of Lead in Lytharge, which is done in purifying the perfect Metals, and the immersive Calcinations of Lead in corroding spirits; of which that which is done with spirit of Vinegar in preparing Salt of *Saturn*, may serve for a sufficient example.

I will only tell you my thoughts upon the augmentation of weight to the eleventh part, which happens to Calx of Lead, and other Metals or Metallick substances, which have been long expos'd to the Action of the fire; that is to say, that so long as the violence of the flame opens and divides the parts, the Acid of the woods or other substances that burn, insinuates it self into the pores of these Limes, where it is stopp'd by the secret *Alkali*, which it there meets with. So that as long as the pores into which it is entr'd, keep themselves open, it remains there conceal'd, like the Acid and Volatile Salt of Woods in the foot of the Chimneys; and making but one body with the *Calx*, the weight of it is manifestly augmented for a time. But if you melt the *Calx*'s, and cause them to resume their natural Metallick body, the closure of the pores of the Metal, drives out the forraign Acid, so that finding it self only compos'd of its proper parts, it weighs no more then it did before it was reduc'd into a *Calx*. And though the *Calx* of Lead in some measure does the office of *Alkali*, by contracting a kind of union with the Acids; and that it cannot be deny'd but that Lead has its secret *Alkali*, like all other Metals and Metallick substances, yet we should do ill to take the whole for that part; and to look upon the whole substance of Lead as a true, pure and simple *Alkali*. For if it were so, it would not only suck up much more Acid, but having once suckt it up, it would make but one body with it, and would not be separated from it, as it is, by Fusion, which it would endure as the Acids united with the true *Alkali*'s do, without any division of their substance.

CHAP. LIX.

Of Salt and Magistery of Saturn.

YOU may indifferently make use of for these Preparations either of Lytharge, *Minium*, *Ceruse*, or the other *Calx*'s of Lead. Because it is sufficient to have a Lead that is open, and in a condition to be easily dissolv'd by Vinegar distill'd. But because this Metal calcin'd to whiteness, comes nearest to the colour of Salt, it is better to make use of *Ceruse*, or some other white of Lead. But you must be sure to chuse a true *Ceruse* of Lead, such as we call *Venetian Ceruse*, and not the counterfeit *Ceruses*, which being mingl'd with Chalk, or other alien substances, have neither the brittleness, weight nor whiteness of that of *Venice*.

Put then into a Cucurbit of Glas or Potters Earth, what quantity of *Ceruse* you please, and having set it in a Sand-bath, and pour'd distill'd Vinegar upon it, five or six fingers above the substance, kindle a fire under the Bath, stirring the Ingredients with a long wooden Spatula, as well to hinder the *Ceruse* from lying in a heap at the bottom of the Vessel, as to hasten the dissolution. Continue the fire very moderate, till the distill'd Vinegar be become very sweet, which is a sign that it has dissolv'd a good part of the *Ceruse*. At which time, after you have cool'd the Bath, pour'd out by Inclination, and filter'd the Liquor, keep it apart in a double Glas-

Bottle; which done, return the Cucurbit again upon the Bath, pour fresh distill'd Vinegar upon the sediment of the Ceruse, and kindling the fire under the Bath, repeat the same maceration and other operations, till the pure substance of the Ceruse be almost quite dissolv'd in the distill'd Vinegar; then having put all the filter'd dissolutions into a clear glass Cucurbit, and set it upon a Sand-bath over a moderate heat, evaporate by degrees the superfluous moisture, till there remain not above a fourth part of the tincture. At which time, having re-filter'd this liquor hot, leave it four and twenty hours in a cool place, where a good part of it will coagulate into white Crystals, long and glistering, which will be cover'd with one part of the liquor, not able to crystallize it self, by reason of its superfluous moisture. Pour that liquor into the Cucurbit by inclination, and having evaporated in the same Bath about half of the moisture, crystallize it again, repeating the same operation till all the Salt of Vinegar, incorporated with the substance of the Lead, be crystalliz'd. Then dry the Crystals, and keep them for your use.

The great sweetness of the Salt of Saturn, is the reason that some have taken it for a Salt of Lead; though indeed it be no other then a real Salt of Vinegar incorporated with the proper substance of the Lead, which the Spirit of Vinegar has dissolv'd; of which you will be satisfi'd, when having distill'd this Salt of Saturn through a Retort, the salt part of the Vinegar being exhald in Spirit, you shall find in the Retort the proper substance of the Lead, which was conceal'd in that Salt, reincorporated and become again a real Lead. You may be also farther convinc'd, by putting this Salt of Saturn with Salt of Tartar into a Crucible, and setting them in a melting fire; for the acid of the Spirit of Vinegar quitting the Lead, to unite with the Salt of Tartar, the same Lead rebecomes what it was before it was dissolv'd by the Spirit of Vinegar, and reduc'd into Ceruse or Calx.

As for the sweet savour of the Salt, there is as little reason to attribute it to the internal Salt of Lead; for besides that it cannot be separated from the other parts of the Lead, and that this Metal has no sweetness in it self, nor any other considerable savour; the same thing is to be concluded of the Salts of Pearls, Coral, &c. Since that after they are dissolv'd in distill'd Vinegar, and the dissolution reduc'd to Salt, this Salt, which is also the Salt of the Spirit of Vinegar, incorporated with the substance of the Pearls, Coral, &c. which the same Spirit of Vinegar has dissolv'd, has a sweet savour very like to that of Salt of Saturn; though it may be averr'd, that this sweet savour does not proceed from any separable Salt which those substances may have; in regard that after precipitation of those dissolv'd substances, or distillation of those Salts, you shall find very near the same weight which they had before the Spirit of Vinegar had dissolv'd them, and that after you have wash'd and cleans'd them from all mixture of the Spirit of Vinegar, you shall find them as insipid as they were before; so far shall you be from perceiving any sweetness in them, no more then in Lead. So that we cannot rationally attribute this sweet savour of the Salt of Saturn but only to the action of the Spirit of Vinegar upon the Lead; nor look upon the sweetness of Salt of Pearls or Coral, but as an effect of the action of the Vinegar upon those substances, and of its union with them, by means of which action the sharpness of the Spirit of Vinegar being carry'd off, they leave a more sweet and soft impression upon the tongue then they did before.

Lead not being able to act, like the Salts, upon the Spirit of Vinegar, and this latter being the only agent in the dissolution of the Calx of Lead, we observe there much less ebullition, and much less heat, then in the union of acids with real Alkali's, where every one does its own proper endeavour, and hastens to contract an union, which is very natural to them, ebullition and heat being the effects of their reciprocal motion. We also see that this ebullition and fervour cease, when after their union is perfected, their action and motion also cease. But here can happen no other heat or ebullition, then what the Spirit of Vinegar only raises by its operation upon the Calx of Lime, upon which also the Spirit of Vinegar works but very gently, because that being usually very much impregnated with slegm, its points are more slender, and less capable of action and motion.

They who are afraid of the coldness of Lead, and the acrimony of the Spirit of Vinegar, may pour upon the Salt of Saturn, Spirit of Wine well rectify'd four fingers high, and having caus'd digestion for three or four days, draw it off again, then dry the Salt and keep it.

Salt of Saturn is highly commended to quench the internal inflammations and heats

heats of Fevers, as also to temper venereal desires, giving it in proper liquors from three or four, to five or six grains. It is also very much esteem'd for the dissolving hard and schirrous tumors, and to dissipate contusions. It is made use of with success in Collyriums, as well to stop fluxes, as to cool inflammations of the eyes, and consume the Pin and Web at the beginning, dissolving it from one scruple to two, in five or six ounces of Celandine or Eyebright water; of which you may augment the quantity, if you desire a more temperate Collyrium. It is also very useful in injections for Gonorrhœas, Inflammations, and Ulcers of the Bladder, Matrix, and their passages. It is also serviceable in Gargarisms, for the most part of diseases of the mouth, caus'd by volatile or fix'd Alkali's; for the acid of the Spirit of Vinegar, assisted by the cold quality of the Lead, sensibly mortifies the working of these Salts, and extinguishes the inflammation which they cause. Which is so much the more conformable to reason; in regard we find by experience, that Sal Prunella, Spirit of Salt, Sulphur, and Vitriol, and all sorts of acids, even to simple Vinegar, are very good for these sorts of distempers; which would be the worse by the use of all other Salts, as well fix'd as volatile.

There is a Liniment to be made call'd the Liniment of Saturn, by stirring together equal parts of the dissolution of Calx of Lead, and Oil of Roses, and reducing it to a kind of *Unguentum Nutritum*, which is very proper for the cure of malignant Ulcers that proceed from a sharp and salt humour; as also for Tetters, Scabs, Ring-worms, and Burns.

There is no need of any particular dissolution of Calx of Lead to make a Magistery of Saturn; it being enough to put into a Cucurbit, or a large glass Pan, as much as you think convenient of the filter'd liquor of Saturn, prepar'd for extraction of the Salt, and to pour upon it softly liquor of Tartar, till the ebullition cease. For the liquor of Tartar uniting it self with the Spirit of Vinegar which had dissolv'd the Calx of Lead, will cause it to quit the Calx, and suffer it to precipitate to the bottom. After which, letting the precipitated substance settle, and having pour'd out the liquor that swims above by inclination, wash the settlement several times with very fair water, till it be dulcify'd, then dry the Magistery, and keep it for use.

This Magistery, to speak properly, is nothing but a Calx of Lead purify'd and subtiliz'd, which is useful in cooling and drying external medicines. Some there are that mix it in Pomatums. But the seeming whiteness which these Pomatums seem to impart to the Skin, is often attended with a colour inclining to that of Lead, and leaves a tincture of the first matter whence the Magistery was drawn, and into which you may change the Salt of Saturn.

You may also make a Magistery of Saturn, by weakning the Spirit of Vinegar impregnated with the Lime of Lead, which with a great quantity of VWater which you might pour upon it, and would force it to quit and precipitate to the bottom the Lime of Lead which it had dissolv'd.

Some having dissolv'd thin plates of Lead in *Aqua-Fortis* made with Niter and Alum, pour upon this dissolution Salt water filter'd, and precipitate a Magistery extraordinary white, which they dulcify by several Lotions, dry in the shade between two papers, and keep for a Cosmetick.

CHAP. LX.

Of the Distillation of Lead.

THE softness of Lead does not render it more proper than other Metals, to afford by distillation different liquid substances, like several Salts and the parts of Animals and Vegetables. For though by keeping Lead a good while over the fire, you may cause it to evaporate into that which some Writers have call'd *Gas*. However neither by distillation or otherwise can you extract out of it any Spirit of Salt or true Oil, whatever men may promise to themselves. Which Impossibility obliges Authors to have recourse to Corroding Spirits, and to reduce by their means

means the Lead into Lime, that by the Union of this Lime with the Spirits, they may extract a Composition much resembling Salt; and afterwards from this Salt, by distillation, a flegm, Spirit, and manifest Oil, of which I will shew you the preparation.

The better to bring to pass distillation of the Salt of *Saturn*, it is good to have it dissolv'd several times in distill'd vinegar, and to have drawn off every time the watry part in *Balneo Maria*, and to have repeated these Operations, till the Spirit of vinegar distill off as acid as it was put in. Whereby you shall understand that the pores of the substance of the lead are perfectly fill'd with acid. Then put two or three pound of salt of *Saturn* well dry'd into a large Glass-Retort: and having plac'd it, and well environ'd it with sand in a Capsula of proper earth; fitted a Recipient to the beak, and carefully luted the closures, begin your distillation with a gradual fire, soft at the beginning but very fierce toward the end, till no more vapours come out of the Cornute. The Distillation being done, and the Vessels cold and unluted, you shall find the flegm and the Spirits of Salt of *Saturn* mix'd in the Recipient, which you must put together into a Glass Cucurbit, and having plac'd it in a Sand-bath, and cover'd it with its head exactly luted, with a little Recipient fitted and luted to it also, make a rectification of the Ingredients over a very soft fire. And by this means, after you have caus'd the Combustible Spirit to ascend in the first place, which is call'd the Ardent Spirit of *Saturn*, though it be only the volatile Sulphury part of the Vinegar; and have after that drawn off the flegm, you shall find at the bottom of the Cucurbit a Purplish Liquor, which is improperly call'd by the name of Oil of *Saturn*, being only the Spirit of Vinegar concentr'd, which has retain'd with it but very few of the particles of the Lead; as will be evident by melting the Mass that remains in the Cucurbit. For that will turn to Lead altogether like that which was turn'd into Lime for the preparation of the Salt of *Saturn*.

I have said in another place, that when Wine is turn'd into Vinegar, the acid part which then predominates does not destroy the volatile Sulphury part of the Wine, but that it there remains conceal'd notwithstanding the contrary opinion of many. The same reasons fortify'd by that which happens here, shews us, that the Combustible Spirit that comes forth in this Distillation, is nothing but the Spirit of Wine that lay conceal'd and as it were envelopp'd in the acid of the Vinegar, which appear'd, when being forc'd by the fire, a good part of the Spirit of Vinegar which had fix'd it, comes to be stopp'd in the pores of the calx of Lead which it had dissolv'd. It happens also after the separation of this Sulphury Spirit, that that which remains at the bottom of the Cucurbit, and is call'd Oil of *Saturn*, has not the same Acidity which a pure Spirit of Vinegar concentr'd might have.

However at *Paris* it is a difficult thing, in the Distillation of Salt of *Saturn*, to separate from it a true Inflammable Spirit, because the Vinegars are counterfeited, and are compounded with water, which is frequently their foundation. Yet we never fail to separate one, when the Vinegar is pure and only made of Wine. This Salt of *Saturn* made with good Wine-Vinegar never fails to take fire and flame, when it is held to the fire.

VVriters do hold, that the Combustible Spirit which is drawn from this Salt is an excellent Diaphoretick, and that it may be successfully administer'd in Malignant Fevers; in Venereal distempers, and those of the Brain, given in proper liquors from five or six to fifteen or twenty drops. The liquor that remains in the Cucurbit is good to cure and cicatrize Wounds and Ulcers, being slightly anointed with it. Others esteem it very much for the diseases that happ'n to Horses Eyes.

CHAP. LXI.

Of Balsoms of Saturn.

SO easie a thing it is to dissolve and incorporate over the fire the powder'd Calx of Lead with Oils, and all sorts of fat substances, that it is thence adjudg'd, that having dissolv'd these Limes in corrosive Spirits, and having reduc'd them afterwards into Salts, it is yet more easie to dissolve them in all sorts of liquors, and to use them in all sorts of Remedies both internal and external.

The Balsoms of Saturn are not the meanest remedies to be this way prepar'd. To which purpose so prescribe, to put into a glass Cornute eight ounces of Salt of Saturn, and to pour upon it twice as much the weight of Ethereal Spirit of Turpentine, and having well mix'd them, to distill them in a Sand-bath with a gradual fire, by which means you shall draw forth in the first place a clear Spirit, very proper for the cure of virulent Gonorrhæa's, especially if you mix therewith a little Camphire; after that an Oil, which is the Balsom of Saturn, very proper for the cure of malignant and canker'd Ulcers.

Others direct you to put four ounces of Salt of Saturn into a Matras, with double its weight of Ethereal Spirit of Turpentine, and having cover'd the Matras with a small blind head, to let them digest in a Sand-bath over a very gentle fire, stirring them from time to time, and to continue the digestion till the Salt of Saturn be very near dissolv'd, and the Spirit well colour'd. Afterwards, having unluted the Vessels, and added an ounce of powder'd Camphire, to relute the Vessels, and continue digestion till the Camphire be dissolv'd, and then to filter this Balsom through a piece of Cotton put at the bottom of a large Funnel, and then to put it up in a double glass Bottle well stopp'd, as an unparallell'd remedy to cure all Fistula's, Wounds, and Ulcers, of what nature soever they were, being apply'd hot to the parts affected. Some make use of the second or third distill'd Oil of Turpentine instead of the Ethereal Spirit, that the Balsom being of a thicker consistence, may stick longer upon the parts. Others make use of the distill'd Oil of Juniper-Berries; believing that besides the vertues which this will have common with the other Balsoms of Saturn, that it will prove also Diuretick, and proper to resist the malignity of Wounds and Ulcers. I omit the Tinctures and Oils which may be made of Salt of Saturn with Spirit of Wine or other Menstruums, by means whereof, after long and often reiterated circulations and abstractions, an odoriferous Oil may be at length obtain'd. Nor will I insert the way of drawing Mercury out of Lead, believing that a man may more profitably employ his time upon other operations more necessary.

CHAP. LXII.

Of the Preparation of Tin.

THough Tin be rank'd in the third Classis of imperfect Metals; as well as Lead; it is nevertheless more pure then the latter. For it is much whiter then Lead; whence it is also call'd White-Lead. It is also more hard, and more useful to make divers sorts of Vessels, as also more pure, and has less dross in it. And it has this particular to it, that it imparts nothing of ill to the Waters or Liquors; provided they be not corrosive. Tin is thought to be compos'd of impure Earth and Sulphur, some Metallick Salt, and a Mercury of Quick-silver, much more pure and digested then that of Lead, but much inferior to that of Gold or Silver. It is call'd by the name of Jupiter, out of a belief that that Planet communicates his influences to it. And it is also thought that the vertues of it are peculiar to the Liver and Matrix.

The

The great aptness which Tin has to melt in the fire, and to mix with other Metals is the reason that being once melted with them, especially with the Imperfect ones, it is a very difficult thing to separate them totally. And therefore the best Method that can be observ'd to have it pure, is in the first place to have it out of a good mine, then to melt it in some great Iron-Ladle, and to burn over it some pieces of Tallow or wax, as over Lead; and to separate the thick matter that swims above like Scum. This great aptness however which Tin has to melt, hinders not but that the hardness and enterlacing of the Branchy part of its substance, make it more difficult then lead, to be reduc'd to a perfect Calx. And therefore it is not enough to melt it, and stir it over the fire with a long Iron rod, till it has taken the form of a Lime; but you must afterwards reverberate that Lime in a proper Furnace, moistning it from time to time with Vinegar distill'd, if you would make it fit to be penetrated and dissolv'd by the same Spirit for the preparation of Salt of *Supier* afterwards, with the same ease as you prepare that of *Sartha*, when it is reduc'd into Lime. But this Salt so distill'd being only compos'd of the Salt of Vinegar distill'd, and of the proper substance of the Tin, dissolv'd and conceal'd in the same Salt; it is better to put it into a Glass Cucurbit, and to pour upon it Spirit of Wine well rectify'd. After which having plac'd the Cucurbit in a Sand-bath over a gentle fire, and having cover'd it with its head, and fitted a small Recipient to it, with all the jointures well luted, draw off this Spirit. Afterwards pouring more Spirit upon the Salt, repeat three times the same affusions and abstractions to make the Salt more fit to be given inwardly from two or three to five or six grains, mix'd with some conserve in Hysterick diseases, especially in suffocations of the Matrix. For which reason it may be also apply'd to the Navil, incorporating it with oil of Rhue. It may also serve for the cure of Fistula's, and old Malignant and Corroding Ulcers, applying it, mix'd with proper Liniments. You may also, after you have dissolv'd the Calx of Tin in Vinegar precipitate the Dissolution with Salt of Urine dissolv'd in Water, and having well wash'd the Magistery, use it for the same uses as the Salt; and mix it with Pomatums prepar'd to beautify the face.

CHAP. LXIII.

Of the Flowers of Tin, and the Preparations of the same Flowers.

THE length of time and trouble which is taken up in the Calcining of Tin by the ways which I have set down, though the most plain and ordinary ways, have enforc'd Artists to seek for methods more easy and more advantagious; where-in some have spent their time with good success. Among other preparations which they have invented, the sublimation of Tin in Flowers seems to me to be one of the best. For though they have not undertaken to make the Tin ascend in Flowers without any mixture, and though fault may be found with the addition of the Salts which they make use of to accomplish their aims, the corrosion of which is to be fear'd: the impossibility however to make Tin ascend in Flowers without their Assistance, and the facility of separating these Salts from the Tin by reiterated Lotions, constrain us to approve the use thereof, provided that having regard to the weight of the Tin, and how unapt it is to rise in Flowers, you augment the quantity of the Salts proportionably, of which you are to make use.

Thus instead of taking equal quantites of Tin and Salt Ammoniack as some would do, take eight ounces of the first or second Calx of Tin, and four times the weight of Salt Ammoniack, and having beaten them to a very fine powder, and mix'd them well, set a good Aludel upon a proper Furnace cover'd with three or four of its pots one upon another, and having well luted, the closures, and cover'd the uppermost with a little head, kindle a little coal fire under the Aludel, and increase it by degrees, till the

Aludel

Aludel be red hot in all the lower part. At which time throw in at the hole about half an ounce of the powder, closing the hole immediately, and by this means the Tin and the Salt Ammoniack will rise together in vapours, which will condense in Flowers within side of the Pots. Then throw in another like quantity of Powder stopping the hole, and leaving the vapours to rise in Flowers, and incorporate, repeating the same operation till all the powder be spent and keeping a good fire under the Aludel to facilitate the sublimation of the Tin, which by this means will be all sublimated. Whereas if you should put in only equal parts of Tin and Sal-Ammoniack, the Tin would remain almost all at the bottom of the Aludel: which is not to be wonder'd at, since it is impossible to make Metals ascend in Flowers, without the assistance of three or four times as much the weight of volatile Salts mix'd with them, or at least without those several consequent cohobations directed to be made use of.

The sublimation being ended, and the Vessels being cold and unluted, scrape off the Flowers from the pots; and putting them into a great earthen pot full of clean Water, leave the whole thus for four and twenty hours; at the end whereof having pour'd out the Water by inclination, you shall find at the bottom of the Vessel the Calx of Tin in form of a Magistery, and having well sweeten'd it by a sufficient number of Lotions, and dry'd it in the shade, keep it as it is, and give it alone or mix'd with other remedies. Not but that you may reduce it into Salt, by dissolving it in Vinegar distill'd, and observing the same method as for the preparation of Salt of Saturn.

You may also instead of Salt Ammoniack, mix with the Calx of Tin three times the weight of Salt of Niter in powder, and fulminate and sublimate them both together in an Aludel cover'd with its pots and a little head, projecting the powder into the Aludel red-hot, observing the same method as for the preceding flowers. Or to do better, pour upon them good Spirit of Wine rectified, two good fingers breadth above the substances, let it burn there, and reiterate the same operation three or four times before you make use of the flowers.

CHAP. LXIV.

Of the Distillation of Tin.

THE impossibility of distilling or making any liquor ascend from Tin, as well as from other Metals when they are alone; and the earnest desire Artists have had to open its substance, and make it fit to impart its virtues, have enforc'd them to mix matters fit to penetrate, dissolve, and cause the substances to distill. To this effect, having mix'd the Calx or filings of Tin, with double its weight of corrosive Mercury sublimate, put them together in a small glass Cornute, environ'd with lute, and having plac'd it in a small Furnace of close Reverberation, and slightly fitted a half Ball to the beak, begin your distillation with an immediate soft fire, which continue till the liquor like Butter cease to distill. At what time, having chang'd the Recipient, increase the fire by degrees, and force it at length, till all the Mercury in the sublimate be reviv'd and dropp'd into the Recipient. Then pouring fair water upon the white and thick water in the first Recipient, & having precipitated by that means the substance of the Tin which the Corrosive Salts of the sublimate had corroded and dissolv'd, leave the matter precipitated to settle, till it be exactly dulcify'd. Then having dry'd it in the shade, keep it for use, giving it from two or three to five or six grains, for the same distempers, that the other preparations of Tin are prescrib'd for.

We should do ill to think that this precipitation proceeds from the Mercury which is the principal ground of the sublimate Corrosive; since experience tells us that all the Mercury that could be in the sublimate, descends into the Recipient after the distillation of the Butter, if the fire be forc'd, and that you may if you please reduce this precipitate into Tin, such as it was before the Corrosive Salts of the sublimate had dissolv'd it.

You may filter and evaporate in part the first Lotion of this precipitate, to have an acid Spirit, not much unlike to that which is drawn from the first Lotion of the Butter of Antimony, which is call'd Philosophick Vitriol; or else Crystallize this Lotion into Salt, by continuing to evaporate it to the film, or spread it, leaving it to cool, and separating and drying the Crystals afterward.

There is also a Butter or Glacial or Icy oil of Tin to be prepar'd, of which there is a preparation to be made, call'd Bezoar of *Jupiter*, after this manner.

Melt in a Crucible three ounces of Regulus of Antimony, with two ounces of pure Tin, then having pour'd this mixture into the Instrument call'd the Iron horn, heated and greas'd within, beat it to fine powder, then having mingl'd this powder with double it's weight of Corrosive sublimate, and put the whole into a little Glass Retort daub'd over with Lute, draw off as well the Butter as the *Mercury*, as you did before; precipitate also the distill'd Butter in the same manner, & wash the precipitated matter also in the same manner. After which you may if you please keep some part of the powder for your use, to purge gently upwards and downwards in Hysterick Maladies, giving it from two to four or five grains in some Conserve or Confection. But to have the Bezoar of *Jupiter*, having weigh'd and put the Powder into a small Cucurbit of Glass, and pour'd upon it three times the weight of good Spirit of Niter, place it in a Sand-bath over a moderate fire, causing the Spirit of Niter to evaporate gently, till the Mass be altogether dry: then having powder'd this Mass, and dulcify'd it very well, with several Lotions, dry it and keep it in a double glass bottle well stopp'd.

This Bezoar of *Jupiter* is one of the best preparations that can be made of Tin. For besides that it is a specifick remedy against all diseases of the Matrix, it is also a Sudorifick and very proper in Malignant, and in Venereal distempers, when you would force out the Malignity by sweat. It is given in Bolus between Meals in some Conserve or Sweet-meat from five or six to twelve, fifteen, or twenty grains.

I omit some other preparations of Steel which you may find in other books, believing that I have shew'd you all that can extract from this Metal whatever good vertues it has in Physick.

CHAP. LXV.

Of the Preparation of Mercury.

Quick-silver is not rank'd among the number of Metals. But it is call'd by the name of a half Metal; because that being neither hard nor Malleable like the true Metals, it mixes easily with all, and especially to Gold, to which it serves as an Intermedium to join it with other Metals. It's Silver colour, and its nature apt to run, have caus'd it to be call'd Quick-silver. As its colour and fluidness have given it the name of *Hydrargyrum*, or Watry Silver, or water of Silver. It is call'd *Mercury*, by reason of the Analogy which it has to that Planet, or to its aptness to change its figure, a property attributed by the Heathens to *Mercury* one of their false Gods. For which reason and for the diversity of colours which you may give it, it is also call'd *Proteus*. And some for its fluidness and volatility have call'd it the *Fugitive Servant*.

Quick-silver then is a Mineral or Metallick Liqueur, of a volatile nature, found in Mines, and compos'd as some believe of a white Sulphury Earth, and its own proper internal *Mercury*, which the Philosophers think to be one of its Principles, and which lyes conceal'd, as well as its Salt and Sulphur. Quick-silver is found in the Mines of *Germany*, *Spain*, and the *Indies*; where it sometimes flows alone in its own proper Mine, or in those of other Metals; but most frequently mix'd among Earths, Stones, and incorporated with natural Cinnabar, whence it is separated by means of the fire.

The weight of Quicksilver is not much different from that of Gold. But its substance is so volatile, and so easy to be penetrated, and divid'd into such small parts;

parts, that it is no wonder it so easily receives the impression of the substances it meets withall; especially of Salts, Sulphurs, and Spirits, and that it submits for the most part to their action, but always to that of the fire. And though we cannot say, that Quick-silver is without its proper Alkali, unless we deny its principles, this Alkali making but one part of its composition, and being inseparable from its other parts, we should do ill to take this half Metal for a pure Alkali, as being it self subject to the operation of Alkali's, more then to that of Acids and Sulphurs; and for that the strongest Acids work but very slowly upon it, and without any effervescency, as we observe in its dissolution by Spirit of Vitriol; and that its being so easily dissolv'd by Aqua Fortis and Spirit of Niter, proceeds from this, that they are compos'd of a double Spirit, the one a volatile and sulphury Saline, and the other Acid, of which the first is the principal dissolvant. I say, we ought not to look upon Mercury as a pure Alkali, in regard it has neither the same substance, savour, nor the other qualities of Alkali's. Whence it comes to pass, that its pores being otherwise shap'd then those of Alkali's, it has not the aptness which they have to join to Alkali's, whose substance dissolvable in water have equally both pores fitted to the shape of Acid parts, and parts proper to join with those of the Acids.

I say moreover, that if Quicksilver were a true Alkali, it might resist the action of the fire, as the fix'd Alkali's do; or at least it might preserve it self, being join'd to Acids, and come to be fix'd like volatile Salt of Vipers, or any other volatile Salt, when being united with Spirit of Salt, or any other very acid Spirit. Whereas all the Experiments made for many years prove the contrary, and that no way could ever be found out to stop and fix Mercury by the fire, neither alone nor mix'd with Acids, nor with any other substance whatever. But we are rather to say, that it is a mixt body, proper to endure the working of Salts, more especially of those whose parts are sulphury saline, then of those whose parts are purely acid, and that the same Salts being capable to dissolve or divide its parts, they lose in that action both the figure and disposition of their parts, not only for that their points are blunted in dissolving the Mercury, but for that the dissolv'd parts of the latter fill the spaces of the first and change their action, even to the depriving them of all their penetration, when they have wholly fill'd up all its pores. As you may observe in dulcify'd sublimate, which never fails of being dulcify'd, when the fluid Quicksilver has fully fill'd up the pores of the corrosive sublimate. And here you may see the difference of the nature of Salts from that of Mercury. For by steeping the dulcify'd sublimate in water, the Salts dissolving there, leave their natural acrimony in it, which was conceal'd by the Mercury, and the same Salts will resume their figure and qualities, if you evaporate the water; and the Mercury assume its former body, if you make use of necessary means.

But the suppos'd name of *Alkali*, not changing the nature of Quick-silver, and the various preparations which are made of it, deserving we should have some knowledg of a mix'd body upon which we spend our time, and a subject too that has so long exercis'd the wits of the Curious, I think my self oblig'd to speak my thoughts concerning it. Which are, that Quicksilver appearing to be actually cold; and that in such a degree, that it is impossible to hold your hand, nor so much as your finger in it long without running the danger of some Palsie or other Mischievous Accident; and being always acknowledg'd for a great Enemy to the Nerves, and natural heat, the use of it is very much to be question'd; or at least, that it is not to be prepar'd or made use of but with singular Caution. For though it have been for many years us'd for the cure of the Pox and its accidents, that does not render it exempt from the Malignity which is natural to it; of which we too often see the ill Consequences, as well in those who are lost by the use of Quicksilver, when it has been unadvisedly administer'd, or in too great a quantity, as for the mischievous impressions it leaves behind, and that for the most part, in persons that are seemingly cur'd, especially where the evil was inveterate. For though Quicksilver, especially when tak'n inwardly seems to perform the function of an Alkali, in this, that the Salt or acid juices in the stomach may fasten to it to dissolve it, it follows not from thence that it is an Alkali. For if it were so indeed, and that the venome of the Pox were acid, as some believe, the same acid would fix it; whereas the dissolution which the juices make of it serve only to augment its volatility, and to render it Corrosive; and that volatility carrying it to the brain and adjacent parts, though it dissolve the flegm by a property peculiar to it, and open a passage for the Flegm to evacuate at the mouth, and to force out with it the venom of the

disease, yet it does not produce those effects without ulcerating the Salivary Vessels, and the parts adjoining; whence follows corrosion and consumption of the proper substance where those Ulcers happen; and that it leaves those marks behind it, which are never to be defac'd.

It were to be wish'd however, that the venom of the Pox were a pure acid; for if it were so, we might seek to cure it by the use of it by fix'd or volatile Salt Alkali's; or in those of Pearls, Crabs-eyes, Corals, and many other such like substances, able to mortify and dulcify the acids, without injuring the parts; and by consequence, we might lay aside Quicksilver, so dangerous in its effects. But these sorts of remedies not being able to subdue the venom of the Pox, in my opinion it can never be said to be a true acid, no more then of a pure volatile or fix'd Salt nature. But rather we must look upon it as a venom, whose nature is otherwise very difficult to be understood, but by the sad effects which it causes by mixing it self with all the humours, and infecting chiefly the whole mass of the blood, and spreading it self over the whole habit of the body. I think also that the great and different progresses, and the fatal consequences which this venom produces, and those which we observe also sometimes after the use of Mercury, require that the Physicians should make new reflections upon it; that when they find this venom working different effects upon the cholerick, the flegmatick, and the melancholy, and upon mix'd constitutions and habits of body, they may make choice of the time and manner, to exhibit Mercury when it is necessary, and that they may make use of other remedies when Mercury is unseasonable.

But though the use of Mercury be not always favourable to all sorts of persons, yet the great relief that many may receive thereby, not only for the cure of the Pox, but many other distempers, engages me to produce the principal preparations that Chymistry can make of it.

CHAP. LXVI.

Of the Purifying of Quicksilver, and of turning it into Cinnabar.

They generally wash Quicksilver in Vinegar where common Salt has been dissolved, or with some good Lye made with Quicklime and some Lixivial Salt, putting the Quicksilver in a double glass Bottle well stopp'd, and shaking it with the one or the other of these liquors, either to suck up, or separate one part of its impurities; then having pour'd out those liquors by inclination, and well dry'd the Quicksilver with some old clean cloth, strain it through a piece of Chameise Skin, in which the coarsest dross of the Quicksilver will stop. But though these ways may be very well made use of, you may also put it into a Retort, and having plac'd it in a Sand-bath, draw forth the Mercury pure, forcing it with a gradual fire, and stop the foulnesses in the Retort. But the better way is by mixing it with Salt Tarrar, and Quicklime powder'd, and distilling it also through a Cornute; for the impurities of the Quicksilver will remain with the Lime and Salt Tartar. They who may have any occasion to make any Amalgama of Gold or Silver, may by putting the Amalgama into a Cornute in a Sand-bath, and forcing it with a gradual fire, cause the Mercury to come forth free from all its filth, which it will leave in the Retort. But Quicksilver quicken'd with Cinnabar, being the most sought for, though vulgar Cinnabar is easie to be had, I will not suppress the preparation, no more then that of its rectification into flowing Mercury.

Put half a pound of powder of Sulphur in a large earthen Pot glaz'd within, fit to resist the fire; and having set it upon lighted Coals, and put a pound and a half of flowing Mercury into a piece of Shamoys Leather, and ty'd it with a hard knot, when the Brimstone is well melted, drop the Quicksilver upon it, press the knot between your hands, so that the Quicksilver may pass through the pores of the Leather, stirring the substances in the mean time with a wooden Spatula, and continuing this

this pressing forth and stirring the Mercury till it be all squeez'd through the Leather, and that it be so united with the Sulphur, that appearing no more, they seem both reduc'd into a black mass. Let this mass cool, and having beaten it to powder, and put it into an Earthen pot proper for sublimations, join to the mouth of that pot another of the same bigness, with the bottom uppermost, having a little hole in the middle of the bottom; then lute the closures, and stop the hole with a little piece of paper, and begin your sublimation with a gradual fire, soft at the beginning, and at length encreas'd and continu'd for some hours, and quite stopping up the little hole, by which means the Mercury being incorporated with that portion of Sulphur which is requisite for it, will sublime to the upper part of the upper pot, leaving some faeces in the lower. Then when the Vessels are cold, you shall find the Mercury sublimated into Cinnabar of a very red colour, enterlac'd with long brown glittering Veins, like in shape to those of Antimony. But this colour will appear much more red and lively when it is broken to pieces and ground; and therefore it is that the Painters make use of it.

This Cinnabar is never exhibited inwardly, but sometimes the fume of it is us'd to provoke salivation in those that are pox'd, if they be strong and lusty. It is also mix'd in Ointments to cure dry Scabs, and such infirmities of the Skin. This is call'd artificial Cinnabar, to distinguish it from natural, which is found in several parts of Germany and France, sublimated naturally in the Entrails of the Earth by some subterranean fire, which uniting the particles of Mercury with those of Sulphur, which are to be found in the same place, causes them to take the form of Cinnabar; which usually nevertheless is full of filth, which consists chiefly in Earth and little Stones that are generally mix'd with it.

You may break the union which the Sulphur has made with the Quicksilver, and restore the latter to its natural body and fluidness in this manner: Powder the Cinnabar very finely in a Marble Mortar, and having mix'd it with as much in weight of the filings of Iron, put this mixture into a small glass Retort luted about, and having set it upon a Calot about two fingers high in the midst of a proportionable Furnace, built in a dry place of Bricks, so order'd as to make a Circle never so little higher than the Retort, put little black Coals round about the Calot, and upon them in three or four places, some few fire red Coals to kindle the rest by degrees, then having fill'd the whole largeness of the Furnace with ordinary Coal, and having cover'd the Retort, and fitted a small Recipient to its neck half full of water, leave the Coals to kindle of themselves, and the fire to act at liberty. For by this means the acid of Sulphur sticking to the Mars, with the pores whereof the figure of its parts do better agree than with those of the Mercury, and quitting the latter, the fire forces it out of the Retort, and to take its former body, falling into the water. By this means all extrinsecal substances mix'd with the Cinnabar, being stopp'd in the Cornute with the filings of Iron, after you have pour'd the water out of the Recipient by inclination, you shall find at the bottom the Quicksilver very pure, and fit for all sorts of uses and preparations.

CHAP. LXVII.

Of Red Precipitates of Mercury.

Some there are who very unadvisedly give the name of Precipitates to certain Cases of Mercury, which are frequently in use. Whereas the name of Precipitate is proper only to certain substances that have been dissolv'd in some corrosive liquor, and which have been afterwards compell'd to quit their dissolvent, and precipitate to the bottom of the Vessel. But custom prevailing above reason, I must follow those who have writ before me, and briefly set down the best of their preparations.

Schroeder, and some others, produce a preparation of red precipitate made with Mercury alone, which being better to administer inwardly than those which are usually prepar'd by dissolving the Quicksilver in corrosive Spirits, deserves to be first mention'd.

mention'd. You must provide an Infernus, or *Hell*, which is a Vessel of good double glass, the neck whereof must be long and very much like a Funnel, the end whereof must be large and very broad. Put into this Vessel four ounces of Mercury reviv'd from Cinnabar, set it in Lamp-Furnace in a Sand-bath very equally in its poise, so that the Mercury may cover the bottom of the Vessel all alike. Then having fill'd with Oil, and lighted three Cotton weiks of a moderate bigness, and set the Lamps under the Bath, so order it that the Matches may burn without discontinuance, and that the Oil may not fail in the Lamp for fifteen days; at the end whereof having made every weik a third part bigger, burn them under the Bath all the rest of the month; then having made every weik bigger by one half, burn them under the Bath for another Month, or till the Quicksilver be chang'd into a red and shining powder. 'Tis sufficient all the while to cover the top of the Vessel with a single paper, and to take care that the Oil be not wanting in the Lamp, and that all the weiks burning equally and without discontinuance, may cast their flame at an equal distance to the middle of the Bath. For by this means the parts of the Quicksilver, having been so long agitated and intermingled by the continual working of the fire, loose at length their natural fluidness, and tire themselves in such sort, that they become a red and shining powder. This operation requires great care and patience; but the trouble is not great, if you have a Vessel and a Furnace proper, and that the Vessel that contains the Quicksilver be set in an equal poise. You may wash this powder with Cordial-waters; or pour upon it Spirit of Wine, and having digested them for some time together, draw off the Spirit, and keep the powder for your use.

This powder is diaphoretick, and apt to provoke great sweats, but it often causes vomiting withall. This is one of the best preparations of Mercury for the extirpation of Venereal distempers, and to carry off Agues. It is a specifick against the worms. The dose is from two or three to seven or eight grains in some Conserve or Sweat-meat. You may before you begin this preparation, add to the Mercury an eighth part of its weight of Gold purify'd by Antimony, and having made an Amalgama of it, and put the Amalgama into the Vessel, proceed in all things as before directed; and the remedy will be so much the better. You may also add to the Mercury a quarter of its weight in pure refin'd Silver, and make an Amalgama of it. Or else Amalgamate together half an ounce of Gold, and an ounce of Silver, and four ounces of Quicksilver, and fix them together as I have directed.

There is a precipitate of Mercury call'd Coralline, or the Coralline Secret, by reason of its Coralline colour, after this manner. Put into a Matras four ounces of Quicksilver reviv'd from Cinnabar, and having pour'd upon it as much as it weighs of good Spirit of Niter, and plac'd the Matras in a Sand-bath moderately hot, after the Mercury is well dissolv'd, slope the neck of the Matras a little, and increasing the fire under the Bath, evaporate the Spirit of Niter till the substance be quite dry. After which, pour as much Spirit of Niter upon the dry substance as before, and when it is dissolv'd slope the neck of the Matras and evaporate the Niter as before, repeating yet twice more the addition and evaporation of the Spirit of Niter, and forcing the fire after the last evaporation, till the Precipitate look perfectly red. Then break the Matras, and powder the precipitate in a Marble Mortar, and moistening it with good Spirit of Wine, never so little above the substance, let it burn, repeating six times the same addition and consumption of the Spirit of Wine upon the precipitate. Then having powder'd it once more, keep it for your use.

This Coralline precipitate is highly esteem'd for the cure of all Venereal distempers, Dropsies, Rheumatisms, and intermitting Agues. It purges universally bad humours, chiefly Flegm, which it dissolves, and carries off by the most commodious ways. It is given in some Conserve or Confection, from three or four to eight or ten grains. It is outwardly apply'd for the cure of old Ulcers, above all Venereal; as also to take away all sorts of Scabs, mix'd in Pomatums.

As to the vulgar red precipitate, you cannot miss of it, proceeding as follows. Put into a glass Retort what quantity of flowing Mercury you please, and having pour'd upon it as much good Aqua-Fortis, or as much good Spirit of Niter as is necessary to dissolve it, set the Retort in a Sand-bath moderately hot; and when the Dissolution is made, bury the Retort in the Sand all over, and having fitted a half Ball to the beak, increase the fire by degrees and continue it, till the Aqua-Fortis be almost all drawn off. Then letting the Bath cool, cohobate the Aqua-Fortis upon

upon the *Mercury* that remains in the Cornute, and draw off the Aqua-Fortis as before, repeating three times the same Cohobations and Abstraction of the Aqua-Fortis, forcing the fire at last more then ordinary, to augment the colour of the Precipitate which will be of a much fairer red, then that which many calcine at the end in a Crucible, where there is not the weight neither of the *Mercury* made use of, besides that you are expos'd to the mischievous vapours of the Aqua-Fortis during its working upon the precipitate. The operation being ended and the Sand-bath cold, you shall find the precipitate at the bottom of the Cornute in a red shining Mass, which you may powder, and keep so in a strong double glass bottle, or else burn over it good Spirit of Wine, if you intend to give it inwardly. Though it is not to be given at all but to men of strong Constitutions, and not above seven or eight grains at the most at a time. The principal use of it being for outward applications, as well in Pomatums and other remedies prepar'd to cure the deformities of the Skin, and mix'd in Ointments to consume proud-flesh and other superfluities of Malignant and Venereal Ulcers. It is the usual remedy that Chirurgeons apply to Cankers and Warts upon the secret parts.

If you intend this preparation inwardly, you must not make use of Aqua-Fortis in the dissolution of the *Mercury*, but Spirit of Niter, or Aqua-Fortis compos'd and made only of Niter and Allum.

CHAP. LXVIII.

Of Yellow and Rose-colour Precipitates of Mercury.

PUT into a glass Cornute three or four ounces, or what quantity you please, of Quicksilver well purify'd, and pour upon it four times as much the weight of Spirit of Vitriol or Sulphur well rectify'd; place the Cornute with the neck upright in a Sand-bath over a moderate fire, and leave it there till the Spirit have quite dissolv'd the *Mercury*, then sloping the neck of the Cornute upon one side, the body being all over buried in Sand, fit a half ball to the neck, and draw off the moisture with a gradual fire, encreas'd toward the end, and continu'd till the *Mercury* remain at the bottom in a white Mass. And you must observe that the first water which comes away will be almost insipid, and that the acid Spirits will not appear till toward the end, because the *Mercury* still retains no good part of the Spirits which have dissolv'd it. The Vessels being cold, having finely powder'd the Mass in a Marble Mortar, pour upon it a good quantity of hot water, till the Mortar be almost full, and you shall see at the same time the white powder chang'd into yellow. Then let the powder settle, and pouring out the water that swims above it by inclination, fill up the Mortar with as much warm water as before, and wash the powder with several such shiftings of water, till it be exactly sweeten'd. Then dry it and keep it for your use.

This powder is call'd yellow precipitate because of its colour. It is call'd *Mineral Turbith*, because it is drawn out of a Mine, and disturbs the natural Economy of the body, violently purging bad humours upward and downward. For which reason it is not very frequently us'd, especially in *France*, nor given but to very strong Constitutions in Venereal distempers, and to them no more then from three or four to five or six grains at a time in Bolus in some Conserve or some other proper medicine. However the force of this powder may be abated by burning over it Spirit of VVine rectify'd, for five or six times.

Rose colour Precipitate of *Mercury* is thus prepar'd; put four ounces of *Mercury* well prepar'd into a Glass Cucurbit somewhat large, and having plac'd it in a Sand-bath moderately hot, pour upon it double its weight of Spirit of Niter, and when the Niter is dissolv'd, take off the Cucurbit from the Bath, and pour by little and little the hot urine of a healthy man, till ebullition cease; by this means the *Mercury* dissolv'd, will precipitate to the bottom, of a Carnation colour, through the U-

nion

nion which the Spirit of Niter has contracted with the Salt of Urine, and the impression which their copjoining has made upon the *Mercury*. Let the Precipitate settle, and having pour'd out the Liquor that swims at the top by Inclination, wash the precipitate several times in fair water, till all the Acrimony of the Dissolvent and Precipitant be carry'd off, and that the Precipitate be exactly dulcify'd.

The closing of the Urine with the Spirit of Niter renders the effects of this Precipitate much more gentle then that of *Mineral Turbith*, whose effects depend chiefly upon the last Spirits of Vitriol, which have dissolv'd it, and are as it were concentr'd with it. Therefore this Precipitate only purges downward, and you may give from five or six to nine or ten grains. As for the diversity of colour I impute it to the various action of the acid or Saline Salts, to their various mixture with the *Mercury*, and the different operations of the fire, or the Liquors. I omit Tanned colour'd Precipitate of *Mercury*, which is done by dissolving it with *Aqua-Fortis*, or Spirit of Tartar, and precipitating it with Liquor of Tartar. I omit precipitates with a mixture of Copper after the *Mercury* is dissolv'd, and several others, proceeding next to the white Precipitates.

CHAP. LXIX.

Of white Precipitates of Mercury.

PUT eight ounces of Quicksilver reviv'd from Cinnabar into a glass Cucurbit of a moderate bigness, and pour upon them twelve ounces of *Aqua-Fortis* drawn from Niter and Alum without any Vitriol, and give them time to dissolve the *Mercury* cold, dissolving apart eight ounces of Bay-Salt in three or four times as much the weight of River water, and filtering the dissolution through coarse paper, getting ready at the same time a good quantity of River water strain'd through a fine Linnen cloth. Then having pour'd the Salt water into a large Earthen pan, and about two pints of River water upon the dissolution of the *Mercury*, pour this mixture all at a time upon the Salt water; and by this means the greatest part of the *Mercury* will coagulate into a substance very white, which will begin to precipitate to the bottom. You may let the precipitate settle for some time, pour forth by Inclination, and keep in an earthen pot, the liquor which swims at the top, especially if you will save the *Mercury* which will remain in insensible parts in the Liquor. But if you will not give your self that trouble, preferring the whiteness of the precipitate to the quantity, having pour'd out the dissolution of *Mercury* upon the Salt water, fill the Earthen pot with River water strain'd through a linnen cloth; then leaving the Precipitate to settle, and pouring out by Inclination the liquor that swims at the top, fill the Earthen pot containing the precipitate with the filter'd water which you must wash over and over again with several filter'd waters, till it be perfectly dulcify'd. After which dry the precipitate, and keep it for your use.

It was not without reason, that I say'd you might reserve in an Earthen pot the first Liquor that swims above the precipitate, because you may by pouring upon it Liquor of Tartar separate the portion of *Mercury* which the Bay-Salt could not precipitate. For it is not as some suppose the more excessive bigness of parts, nor the Cubick figure of Bay-salt, nor the weight of the fall upon the dissolution made by the Niter that can shake or break the points of the Spirit of Niter when it has dissolv'd the *Mercury*; but it must be attributed to the Union of the acid part of the Spirit of Niter made at that time with the fix'd Salt part of the Bay Salt: or else we may impute it to the figure and aptness which the Salts dissolv'd in water have to join mutually one with the other, and to expel by that means all forraign substances, which being mix'd among them may prevent their Union, inasmuch that being variously figur'd, they intermix and pester one another in such manner that from thence arises a Composition, the parts whereof are otherwise figur'd, as you may observe in *Aqua-Regalis*, by the conjunction of the Salts Ammoniac, Bay Salt, or Sal-Gemma, with Spirit of Niter. Otherwise if the more excessive bigness of the Points of the Salt Marine, their shog or shaking carry'd the precipi-

precipitation of substances dissolv'd in Spirit of Niter, we should then find the first with their thick points, separated from those of the Spirit of Niter. Whereas by evaporating and crystallizing the liquor, we find their points reciprocally mix'd one with another, making a new body together. For though the parts of all the Salts dry'd, seem of a different thickness and shape, the same parts nevertheless dissolv'd in water, are thicker or smaller according as there is more or less liquor; since we find by experience, that Niter crystalliz'd in a greater quantity will yeild Crystals much more slender, then that which shall be dissolv'd in a less quantity of water. Moreover the water wherein the Salts are dissolv'd, making a great division of their parts, and diminishing the bigness and thickness of their points, renders them more fit to thrust themselves one into another, which they could not do when the Salts were dry and reduc'd into great Crystals. 'Tis also known, that 'tis chiefly the water which gives the Salts the liberty of motion and action, and that so making them as well more easily capable to penetrate other bodies, it may enable them to penetrate themselves, and to unite mutually one with the other.

But though the union of the parts of the Salt Marine with those of the Spirit of Niter, were of force enough to push forth of the pores of the latter a good part of the Mercury dissolv'd, the Salt Marine not abounding in quantity sufficient, and not containing fix'd Salt enough, to fill up all the pores of the acid part of Spirit of Niter, it happens, that if you pour liquor of Tartar upon the liquor which you have reserv'd, and upon what the Salt Marine could not precipitate, the Salt of Tartar filling up the pores of the Acid of the Spirit of Niter, and its own pores filling themselves reciprocally with the Acid, the Mercury that lay conceal'd, is constrain'd to make way, and to precipitate to the bottom; which would never come to pass, if the thickness and bigness of the points of the Sea-Salt, their weight or violent pushing against those of the Spirit of Niter had been the true cause of the precipitation of the Mercury. Considering that it happens also, that the Salt of Tartar, not being able to meet with certain acid particles that retain'd some remainder of the Mercury in dissolution, if you pour upon them Salt of Urine dissolv'd, these last acid particles will unite themselves and quit the remainder of the Mercury. Whence will follow a new precipitation, though less then the first, because of the lesser quantity of Mercury that remain'd.

You may by putting white Precipitate dry into a Matras in a Sand-bath, cause it to sublimate with a gradual fire, observing the same method as for ordinary sublimates, and have a very gentle sublimate, very serviceable in the cure of Venereal distempers, giving it in Bolus from ten or twelve to twenty or thirty grains, mix'd with some Conserve, or other purgative remedy.

You may also give white Precipitate without subliming it, but it must be then to persons of a strong constitution, and only from three or four to seven or eight grains, because that notwithstanding all the Lotions, some particles of the Salts lye still conceal'd in its pores, that cause it to purge upward and downward. But this Precipitate is more frequently us'd externally for the cure of Scurs, Tetters, and other deformities of the Skin, being mix'd and apply'd with proper Liniments. It is also us'd in Pomatums to beautifie the face; but though it manifestly whitens the complexion, the Quicksilver being an enemy to the Nerves, and natural heat, the frequent use of it may at length prove very dangerous.

But because of the ill qualities that Aqua Fortis bequeaths to Mercury after it has dissolv'd it, and the change of colour which may thereupon happen to it; of which we see the effects when we pour upon it liquor of Tartar, you may prepare a white Precipitate without Aqua Fortis, according to *Schroders* method.

Powder very finely eight ounces of Salt Ammoniack, and having put it into a glass Cucurbit, set it in a Sand-bath moderately hot, and having pour'd upon it three or four times as much the weight of River-water, when the Salt is dissolv'd, filter the dissolution through a course paper; and returning it into the Cucurbit made very clean, dissolve without any heat in the filter'd liquor eight ounces of corrosive sublimate. After which, pour upon the dissolution drop by drop, four ounces of liquor of Tartar, which uniting it self with the acid part of the Salts, which ascend with the Mercury in sublimation, and kept it still in dissolution, will force it to give way, and cause it to precipitate by degrees in a white substance. Nevertheless you must at the same time pour upon the precipitation a good quantity of fair water; strain'd through a Linnen Cloth, as well to weaken the dissolvants, as to moisten the Salts. Then let the precipitate settle, and having pour'd into another Vessel

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the liquor that swims at the top, wash it with several fair waters, till it be perfectly dulcify'd; then dry it in the shade between two papers, and keep it for your use.

This Precipitate purges upward and downward, like the former; but whereas you may not give above seven or eight grains of the former, you may give to twelve of this, because that the ill qualities of the acid Salts of the sublimate being weaken'd by the action of the Salt Ammoniack and Tartar, it is not so deeply fix'd as that of the Aqua Fortis in the former, where that water is only temper'd by the Bay-salt. Whereby you may observe, that the cohobation of the liquor of Tartar upon the Mercury sublimated, dissolv'd in the liquor of Salt Ammoniack, does not work the same effect as upon the dissolution of Mercury made with Aqua Fortis; in regard that whereas the Precipitate of sublimate is perfectly white, that of Mercury dissolv'd by Aqua Fortis becomes almost red, by the mixture of the liquor of Tartar. Which I think is to be imputed to the sulphury part of the Spirit of Niter, the secret red colour whereof manifests it self in the distillation of Aqua Fortis, and by its union with the secret ferment of the Salt of Tartar; since that red colour never happens to the Precipitate dissolv'd by Aqua Fortis, unless you mix with it the liquor of Salt Marine, no more then to the dissolution of sublimate corrosive, unless you mix with it the liquor of Tartar; because there is not any substance Nitrosulphurous either in the one or the other which can give this colour, acting reciprocally with the Salt of Tartar.

It is good to give this Precipitate in purgatives, among the rest in *Confectio Hammach*, as well for the cure of Venereal distempers, as of the Kings Evil, the Scurf, the Leprosie, and all deformities of the Skin, for which purposes this Precipitate is very servicable, mix'd with Liniments or Pomatums, and apply'd externally; also its Lotions, which you shall do well to keep for the same uses, under the name of the *Polonian Water*.

CHAP. LXX.

Of Corrosive Sublimate.

THE slender union and mobility of the parts of Quicksilver rendring its substance very easie to be divided and penetrated by the action of the corrosive Salts, the most acid and subtle parts of the same Salts thrusting themselves into the pores, and beginning to form a kind of union with it, never quits it, unless you mingle some other substance with it, which being more apt to unite with the same acids, and their pores better fitted to their points, be more able to stop them then Mercury is. Whence it afterwards comes to pass, that exposing the Mercury, naturally volatile, to the fire, it would evaporate into the air with the same acid, if it found not some Vessel fit to retain it; and that also being in a Matras, and forc'd by a gradual fire, it gives way to the activity of the fire ascending by degrees to the top of the Vessel, and that raising with it some acid part of the Salts, with which it was mix'd, forms with them a white body fill'd with shining and crystalline veins, separated and keeping above the grosser parts of the Salts when the operation is over, and all is cold.

Some direct this way, That having put a pound of Mercury well purify'd into a Retort, and having pour'd upon it as much in weight of Aqua Fortis, or Spirit of Niter, and plac'd the Retort in a Sand-bath moderately hot, when the Mercury is dissolv'd, to augment the fire, and to observe the rules of abstraction of the dissolvent, till the Mercury remains in mass at the bottom with the most fix'd parts of those liquors. After this, that having beaten to very fine powder a pound of Vitriol calcin'd to whiteness, and as much Salt decrepitated, to mingle them together with the mass of Mercury powder'd also, and having put the whole into a Matras to make a sublimation thereof, whereby you shall find at length above all the grosser parts of the Salts, the Mercury united with their acid part, sticking in a solid white crystalline form to the top of the Vessel. But though this preparation may be convenient for those that will not be troubled with the dust that arises from the Salts,

Salts, when they mix them simply with the raw *Mercury*; and that it may do well enough when the sublimate is only intended for external uses; yet the sharp and particularly the Salt Sulphury parts of the Niter equally residing both in the Spirit and in the Aqua-Fortis, being shrewdly to be suspected when you prepare this sublimate with a design to dulcify it, for internal uses, it will be much better not to make use of these Sprits at all. For though Experience teaches us that in the abstraction of these Dissolvants, we draw off so great a quantity of Corrosive Spirit, as is sufficient to dissolve anew almost as much *Mercury* as before, notwithstanding the watry part which is mingl'd therewith; yet the Mass is impregnated with the most corrosive parts of the Spirits, which had dissolv'd the *Mercury*, and the same Spirits accompany it in sublimation. But that you may have a Corrosive sublimate proper to make a Dulcify'd sublimate, and fit to be us'd inwardly.

Calcine a requisite quantity of *German Vitriol* to whiteness, and decrepitate as much Salt of *Mars*, and having reduc'd them apart to a very fine powder, weigh out a pound of each, and as much *Mercury* reviv'd from Cinnabar, and beat them together in a Marble Mortar with a wooden Pestle, sprinkling them from time to time with never so little Spirit of Vinegar, only to allay the dust; and beat them till the *Mercury* be so well mingl'd with the Salts, that it be hardly to be seen, but seem to make one body with the red. After which having put this mixture into a Matrafs, of which two thirds must remain empty, set it in a Sand-bath in a Capsula proportionable, plac'd in a proper Furnace: where by a fire very slight at the beginning, then augmented by degrees, and forc'd at the end, cause the *Mercury* to ascend with the acid part of the Salts to the top of the Matrafs in a white and Crystalline substance. Whence you must take it forth when the sublimation is ended, and the Vessels are cold, breaking the Matrafs; and the bottom whereof you shall find the thicker part of the Salts that could not ascend. After that, having beat the sublimate in a Marble Mortar, with as much Vitriol calcin'd white, and decrepitated Salt powder'd, as before, put the whole into a new Matrafs of the same bigness with the former, and repeat the same Sublimation again. Do this a third time, and then you shall have a Salt very corrosive; but such a one whose corrosion proceeding only from the acid part of Vitriol and Salt of *Mars* will be easily subdu'd, upon using the necessary means for Dulcification.

The acid parts of the Salts which are united with those of the *Mercury* render this sublimate so corrosive, that it will not only corrode the internal and external parts of Animals, but of all sorts of substances, even Metals themselves. But this sublimate, like all other Salts, its unable to act, being dry, and that its activity is greater or lesser according to the quantity of moisture which it meets with. And therefore it would do great spoil in the stomach, because it would there meet with moisture sufficient to set it at work. And therefore besides the use of it in *Phagedenick* water, the most common is that for the preparation of Dulcify'd Sublimate.

CHAP. LXXI.

Of Dulcify'd Sublimate, or Mercurius Dulcis.

BEat in a Marble Mortar with a wooden Pestle a pound of Corrosive sublimate prepar'd as I have shewn, and having added to it three quarters of its weight of Quicksilver reviv'd from Cinnabar, and beat them so long together that the Quicksilver be not at all to be seen, but that both together look like a grey Uniform powder. Then put this powder into a Matrafs, or into a very thin round glass bottle, of which two thirds must be empty. Place the Vessel in a Sand-bath and proceed to Sublimation with a Gradual fire, observing the same method in all things as for the sublimate before. The whole being cold, after you have broken the Vessel in two in the middle, separated and thrown away the red powder that remains at the bot-

tom, and reserv'd the white powder that sticks to the neck of the Vessel, taste it, and if you perceive any Acrimony, beat it again in the same Mortar, adding and beating together with it an ounce of flowing *Mercury*, or as much sublimate as will drink it up. Then put this powder into a new Matrafs, make another sublimation and separate the powders above and below as at first. After which, having repowder'd the sublimate in the same Mortar, and put the powder into a new Matrafs, make a new sublimation. And by that time the sublimate will be very slightly, and sufficiently sweeten'd. But if you would make it yet more beautiful, put into a new Matrafs in the same bath, and reiterate Sublimation, separating the powders afterwards both at the bottom and top of the Matrafs, and keep the Sublimate for your occasions.

The repeated Sublimations of this preparation may well dissipate some part of the acids contain'd in the Sublimate Corrosive: but the remaining parts being too superabundant, and too much fix'd in the Corrosive sublimate, to be wholly carry'd off by Sublimations; it is no wonder that the flowing Quick-silver, added to the Corrosive Sublimate, vvas capable to mortify the acids, and change their Corrosive Quality into Dulcify'd. And yet 'tis no great Marvel, considering that vvhheras the vvhole substance of the *Mercury* was fill'd with acids, to make a Corrosive Sublimate, here all the Pores of the acids are fill'd vwith *Mercury*, so that their points being clos'd up, they are then incapable to act and penetrate. Seeing that Experience teaches us, that the Dulcifying of Corrosive Sublimate is never perfect, if you have mis'd the mixing of as much flowing *Mercury* as was necessary to fill the pores, and close up the points of the Acids, which render'd it corrosive; and that *Mercury* is the only substance than dulcify it, by subliming with it. We must not think that these points penn'd up, are thereby destroy'd; since they may be separated at any time by reviving the Quicksilver from either the one or the other sublimate, by the means of Salt of Tartar, Quick-Lime, or any other Substance of the like nature; which filling the pores of the acid and being by them reciprocally fill'd, and uniting themselves with it, will restore the Quicksilver its former liberty and form.

Dulcify'd Sublimate is often us'd in the cure of Venereal distempers. But it is very prevalent also in Dropsies, and in obstinate obstructions of the Liver, Spleen and Matrix; but more especially to kill worms, giving it in Bolus mix'd with purgatives, that it may attend their operation, chiefly if you fear it should raise a Salivation. The dose is from half a Scruple to half a dram, and some to two Scruples, where the Patient is of a strong constitution, and more powerful effects are expected.

I said before that you might prepare a Dulcify'd sublimate of white Precipitate without addition. The same thing may be done with yellow Precipitate of *Mercury*, by sublimating it alone after you have well wash'd it: by which means you shall have a sweet Sublimate that will only purge downwards, of which you may give from three or four to seven or eight grains. But you may do yet better, if after you have beaten in a Marble or Glass Mortar four ounces of yellow precipitate *Mercury*, well wash'd, and dry'd, and incorporated with it, as much flowing *Mercury* as will suck it up, you sublimate the powder after the ordinary manner; and then powder the Sublimate again and re-sublime it two or three times without any addition. For by this means you shall compass a Sublimate very well Dulcify'd, which will only purge downwards, of which you may give to ten or twelve grains in all distempers, where the ordinary Dulcify'd Sublimate is us'd.

C H A P. LXXII.

Of Mercurial Liquors.

SOME have given the name of Oil to certain Liquors extracted out of *Mercury*, or from substances mix'd therewith. But the names not changing the qualities of things, I will not stand to decide the question, but give you those preparations which I think most fit to be inserted. The *Polonish* water, and the *Phagenick* water, may pass for *Mercurial* Liquors. But there are *Mercurial* Liquors more concentr'd and more powerful of several sorts. As for example,

Grind very finely upon Porphyry equal parts of Sublimate Dulcify'd, and Sal-Ammoniack; then having spread the powder in a very fine Dripping-Pan, and set it a little sloping in a Cellar, or in some moist place, and plac'd a proper Recipient under the place where the dripping is pour'd out, leave it so till all the Salts are dissolv'd and chang'd into a red Liquor, which you shall find in the Recipient mix'd with the *Mercury* reviv'd, which you must separate for the same uses as before. This Liquor is for external uses to consume proud flesh, and the superfluity of Wounds and Ulcers, particularly Venereal; and though the substance of the *Mercury* seem to be almost all reviv'd, the Liquor however has retain'd particles enough to deserve the name of *Mercurial*.

Agricola, *Hartman*, and other Authors after them, have describ'd a *Mercurial* Liquor of *Jupiter*, which I thought fit to insert. Melt in a Crucible a pound of *English* Tin, and having heated a pound of *Mercury* reviv'd from Cinnabar, pour it upon the Tin, and make an Amalgama, which you must wash with hot Salt-water till the Amalgama be as white as Snow. After which having well wip'd it and beaten, it in a Marble or glass Mortar, with two pound of Sublimate Corrosive, spread the mixture plac'd with a Recipient as before, where you shall find the Salts dissolv'd into Liquor, among which will be the Liquor, which will be reviv'd, by the Salts leaving it, and dissolving into Liquor. Then having set the *Mercury* apart for use, put the Liquor into a Glass Cucurbit in *Balneo Maria*, and gently evaporate the superfluous moisture, and after a Maceration of fifteen days in the same Bath over a moderate fire, having pour'd this Liquor into a small glass Retort, environ'd with Sand in a Capsula of Earth plac'd in a proper Furnace, fit a Recipient to the beak, and begin your distillation with a Gradual fire, but encreas'd at the end, and you will obtain a Liquor, being in some sort like Oil which is very much esteem'd for the cure of Cankers, Wolfes, Fistula's, and all sorts of Malignant and corroding Ulcers.

The same *Agricola* describes another *Mercurial* Liquor, for the preparation of which he prescribes the beating of equal parts of Dulcify'd Sublimate, and Salt of *Saturn*, and then to put them both together into a glass Cornute, plac'd it in a Sand-bath with a Recipient fitted and luted to the Neck; by which means you shall draw forth a white sweet liquor, free from any Acrimony. Then he farther prescribes to let the Vessels cool; and to powder and put the settlement into a new Cornute of Glass, and having pour'd upon it the distill'd Liquor, after a soft digestion of seven or eight hours, to reiterate the Distillation in the same Bath by which means you shall have a yellow Oil, fit both for inward and outward uses, for the cure of all sorts of Ulcers, especially Venereal.

The same Author prescribes moreover to mix equal parts of Dulcify'd Sublimate, and Sugar Candy powder'd, and to put them into a glass Cornute, plac'd in a Sand-bath, and with a gradual fire to extract an excellent Liquor for the cure of all sorts of External and Internal Ulcers.

I could here insert several other Extracts, Sulphurs, Salts, and other preparations of *Mercurius*, were they not more for Ostentation then profit.

CHAP. LXXIII.

Of Antimony in general.

Antimony is a Mineral body, which approaches very near to the nature of Metals, and is generally found in the Mines of the one or the other. It passes for a kind of Marcasite, being call'd by some Marcasite of Lead. It is thought to be compos'd of a double Mineral Sulphur, the one Metallick, and very near in pureness, and something of the colour of that of Gold; the other terrestrial combustible, and almost like our common Brimstone; of a Metallick Fuliginous Mercury, ill digested, but better bak'd then ordinary Mercury, and participating of the nature of Lead. Some have thought, that Antimony contain'd in it the principles of all Metals, because it is found indifferently near to all their Mines. It is call'd the Philosophers Wolf, or Saturn, because that being expos'd to the fire with Metals, it devours or causes them to consume, all except Gold. It is also call'd *Proseus*, because of the diversity of colours which Artists give it by exposing it to the fire.

Some have thought, that because Antimony frees Gold from all its dross and foreign substances, it may do the same thing in man, by the means of several Chymical preparations, and that it is able to empty the body of all ill humours by all the issues provided by nature, as if it enclos'd that *Universal Medicine* to which so many Philosophers and Physicians have aspir'd. But though they cannot boast of having found in any one remedy drawn from Antimony the cure of all diseases, yet we may assure our selves that among the various preparations made of this Mineral yet we may say, that there have been extracted from this one Mineral substance more different remedies toward the cure of diseases then from any other Mineral body.

Raw Antimony in powder is made serviceable for Venereal distempers, being ty'd up in a knot and boil'd in decoctions for that purpose; as also in Collyriums, for infirmities of the eyes, and in external remedies to cleanse dry and cicatrice Wounds and Ulcers.

CHAP. LXXIV.

Of Glass of Antimony.

TO make Glass of Antimony of a Jacynth colour, chuse out very pure Antimony, whose spires are long and glistering; and having powder'd them very finely, and put the powder into an earthen Capsula, or earthen Pot unvarnish'd, yet broad, flat, and fit to resist the fire; put the Vessel upon a proper Furnace, and kindle a moderate fire in the Hearths-place, which you must so govern, that having heated the Capsula by degrees, it may be afterwards strong enough to make the powder of Antimony smoak, and begin to calcine. When the powder begins to smoak, stir it gently with a Copper Spatula, without intermission, and keep an equal fire under the Capsula, reasonably hot, turning your head from the fumes that rise from the Antimony, which will waste by degrees, and continuing the calcination, till not only the powder cease to smoak, and is become of an Ash-colour, but that melting some part of the powder in a Crucible you find it turn into transparent Glass. But if the powder chance to clot together in calcination, give over, and powder the clots again, then go on without ceasing, though it be the labour of some days; for the vitrification of Antimony can never be true, if the powder be not well calcin'd, or if there remain the least particle of its Sulphur.

The powder of Sulphur being perfectly well calcin'd, you may easily reduce it into glass, if you have a good Wind-Furnace. In the Fire-place whereof having put a small *German* Crucible upon a Culot, kindle about it a fire proportionable to the capaciousness of the Hearth-place, blowing it with the Bellows, and not putting

ting into the Crucible above two or three ounces at a time, and it will melt presently; and when the powder is all melted, pour the hot substances into a clean Copper Kettle, and you shall find it turn'd into Glass of a transparent Jacinth colour. If you want more Glass, repeat all the same operations over again.

During the fusion, put a little Cover upon the Crucible to hasten the Vitrification of the powder, and cover also the Furnace with its Cover, the better to keep in and reverberate the heat upon the substance, and hasten the fusion, which will better and sooner be done, and with Coal in the Furnace which I have describ'd, then with four times as much Coal in another, provided the powder be well calcin'd. Neither will it be necessary to keep the powder an hour in fusion, nor to add raw powder of Antimony, nor Sulphur, nor Borax, to facilitate vitrification of the powder, since you may vitrify in this Furnace alone in less than half a quarter of an hour, and satisfy *Zwelfers* desire, when he uses this Glass for the preparation of Syrrup Emetick.

You may also forbear stirring the melted substance with an Iron rod, to know whether the Glass be diaphonous, for the Antimony corrodes the end of the rod, in that little time, which may spoil the brightness of the colour; besides that if the powder be well melted, the Glass will certainly be of a lovely colour. Some chuse fair weather for this preparation, but that is neither here nor there, if you observe the right method.

Glass of Antimony purges upwards and downwards all tumours that it meets with, if you give it in fine powder from two to three or four grains in some Conserve or Sweatmeat; or from three or four to five or six grains in White-wine, or some Cordial-water. But it must not be given to any but persons of a strong constitution, and who being wide Chested, vomit freely; for its effects are too violent for tender constitutions.

In the mean time you must not admire, that after the consumption of the combustible Sulphur of Antimony, in calcining it for the preparation of its Glass, the same Glass should be still vomitive and purgative, since that its principal qualities proceed from its internal Sulphur, which is not separated but with very great difficulty, as we observe in the *Regulus's*, *Saffrons*, and other preparations of Antimony, which notwithstanding the mixture of Niter, Tartar, and Sublimate, &c. yet still purge both upward and downward, and since 'tis impossible to take away its Emetick and purgative qualities, but by calcination and keeping it long upon the fire with three times the weight in Niter; the simple acids not being able so tame its vomitive and purgative qualities; and the Niter it self, nor its sulphury Spirit not being able to deprive it of its diaphoretick faculty, which manifests its self when the others appear to be annihilated.

But now to shew you the correction which I promis'd for Emetick Syrrup, which I describ'd in the second part of this work, grind upon a Porphyry to very fine powder twelve ounces of Glass of Antimony prepar'd as I have directed, then having mix'd with it three ounces and a half of powder of Niter, heat a Crucible red hot, cover'd with its Cover and plac'd upon a Culot in a proper Furnace, and throw into it by degrees little spoonfuls of the powder at a time, then cover the Crucible, and when the powder is red hot, take out the Crucible and let it cool; when it is cold, you shall find a mass or lump of a colour between yellow and black, which after you have powder'd very finely upon Porphyry, you must wash immediately with water only lukewarm, pouring it out by inclination afterwards, not letting it to stand at all in the Vessel, and dry the powder when it is sufficiently dulcify'd. Thus you shall have a Glass of Antimony corrected, the effects whereof will be much more gentle then before, and which you may safely make use of as well for the preparation of Emetick Syrrup, as for many other occasions, giving it infus'd in Wine from four or five to fifteen or twenty grains, ordering the dose according to the age and strength of the Patients.

You may also prepare Glasses of Antimony white, yellow, red, black, &c. by different calcinations of the Antimony, adding to it Borax, Sulphur, and other substances. But in regard the colour does not alter their vomitive and purgative qualities, and for that the preparation which I have here shew'd, may serve as an example for all, I thought it not convenient to swell this Chapter with additions little to the purpose.

CHAP. LXXV.

Of Saffrons of Antimony.

THis preparation is call'd by the name of *Crocus* or Saffron, because of the yellow colour that dyes the lump, after it is powder'd : and it is call'd *Saffron of Metals*, or *Crocus Metallorum*, because Antimony is found near to the Mines of Metals, or by reason of the Sympathy it has with Metals : it is also call'd the *Liver*, by reason the Mass is Liver colour'd before it is beaten. This preparation is common enough, though the method be various. For some after they have bruis'd and mix'd equal parts of Antimony and Niter, and put this mixture into a great Iron or Brass Mortar, having carelessly cover'd the Mortar with some large Brick or Tile, heated before, put fire to the powder, casting into it a little Coal kindl'd, upon which ensues a Fulmination, and Fusion of the substances ; during which, the purer parts of the Antimony descend to the bottom of the Mortar, in the shape of the Liver, and the dross remains at the top with the Saline fix'd part of the Niter, of which you may afterwards make separation. Others putting less Niter by half then Antimony, but in all things else proceeding as before, find a Saffron at the bottom of the Mortar very little differing from the former, but more vomitive and in greater quantity : because that there being less Niter, the particles of the Antimony were less agitated, and their dissipation is less.

Others having mix'd equal parts of Antimony and Niter, and plac'd an Earthen pot fit to resist the fire upon a Culot in the midst of the fire-place of a proper Furnace, kindle a fire round about it, and having cover'd the pot, they make it red-hot, then having made up the powder in little papers, they uncover the pot, and make projection by little and little, covering the pot again, causing every paper to fulminate one after another till all the powder be projected. Then they take the pot gently from the fire, and let it cool, and having separated the Saffron from the dross, they put it up for use. Others instead of separating the Dross, beat it together with the *Liver of Antimony*, then boiling the whole for some time in a good quantity of water, and filtering the decoction hot, they pour Vinegar distill'd upon the filter'd Liquor, and precipitate a very fine Saffron, which they wash, dry and keep for use.

Others powder and mingle equal parts of Antimony, Niter, and Bay-Salt decrepitated, and putting the mixture into a good Crucible, the half whereof must remain empty, they cover it with another Crucible of the same bigness, having a little hole in the bottom, and having well luted the closures of the Crucibles, and given the Lute time to dry, they place it upon a Culot in the midst of a fire-place of a proper Furnace. Then having kindled a fire round about it, they leave the substances to detonate and melt : after which they take the Crucible from the fire, and when the Crucibles are cold, they break that which contains the matters, and find at the bottom the *Liver of Antimony*, the colour and powder whereof are much more red then those of the former, and cover'd with Salts, of which you must afterwards make separation. The shape and colour of Marcasite, which is very much like to that of Opal, is the reason why some have call'd this *Liver of Antimony* by the name of *Magnesia Opalina*, believing it to be the true *Crocus Metallorum* of *Rulandus*. True it is that this is the fairest and best preparation of Antimony that can be prepar'd, as well to make Emetick-wine, as to give in powder from eight, or ten, to twenty, thirty, or forty grains, in some conserve, or an Egg, a roasted Apple, or otherwise. It is very serviceable in Colliriums, reduc'd into very fine powder and infus'd or dissolv'd in Ophthalmick Waters.

Liver of Antimony purges upward and downwards all bad humours that it meets with. This Liver also consisting of the grosser parts of Antimony, has some appearance of Glass, but nothing so transparent nor altogether so hard. The Grosser parts remaining in the Lump, serve to bridle the activity of the more pure parts ; and therefore this powder is given in a much greater dose then the Glass.

CHAP. LXXVI.

Of Regulus of Antimony.

THE name of Regulus, or Petty King, seems to have been very unadvisedly given to Antimony thus prepared, considering that instead of being superiour to the other parts like Kings; it is still below them, and falls to the bottom of the Crucible or other Vessels after the Antimony is melted with substances capable to separate the pure parts from the impure. But the weight and closeness of its purest parts, causing them to precipitate to the bottom, where they find themselves concentr'd in less room than the dross, which remains above mix'd with the Salts; and the perfection of the same parts has acquir'd it the name of Regulus, which is attributed also to other Metals purify'd and melted.

Niter and Tartar are the usual Metals mix'd with Antimony. But every one orders the quantity as he pleases. For some mix equal parts of Niter, Tartar and Antimony. Some to one part of Niter and one part of Tartar, add two parts, of Antimony. Others put more Niter than Tartar, others more Tartar than Niter. Some mix powder'd Coal. And some there are who having beaten and *detonated* together equal parts of Tartar and Niter, and having repowder'd the Mass, mix sometimes less, sometimes more of it with the Antimony in powder, and melting this mixture in a Crucible, draw forth the Regulus. But though we may extract a Regulus by any of these ways, I will here shew you the quantities the Method which I have made use of, and which have succeeded with most advantage for the preparation.

Place a good Crucible upon a Culot in the middle of the fire place of a Wind-Furnace, and having cover'd it, and kindl'd a good fire round about it, get ready two pound of Powder of Antimony, a pound and a half of Tartar of *Moumpelier*, and three quarters of a pound of Niter beaten to powder also, and having well mix'd them, fill two little Cornets of Paper with the powder, containing each two ounces. Then when the Crucible is red hot, uncover it, and throw in one of the Corners, covering it at the same time, and leaving the powder to make detonation; when that detonation is over, cast into the Crucible another Corner, and let it fulminate like the former, continuing Prejection and Detonation, and to cover the Crucible, till all the powder is projected. Then casting in about an ounce of powder of Niter upon the Ingredients, and having well mix'd them together with a long Iron-Rod, cover the Crucible and force the fire. And when the substances are well melted, take the Crucible out of the fire with a pair of Tongs; and when it is cold you shall find the Regulus at the bottom: or else having taken the Crucible off the fire, pour the substances into an Iron Antimonial Horn heated and greas'd withinside, knocking the at the horn same time, that the Regulus may the better sink to the bottom. Then when the Matters are half cold, turning the Horn upside-down, you shall find the Regulus which was at the bottom under the dross, and having separated with two or three blows of a Hammer, and well wash'd it. you shall find it white, shining, and also as it were full of Starrs, if you have proceeded right in the operations, and melted the substances well at last. Afterwards you may remelt this Regulus in a lesser Crucible, and throw upon it a little good powder of Niter to make it more pure; then casting it into fit Moulds, you may make Goblets which are call'd *Chymical*; or else Pills which are call'd *Perpetual*; of which you may give one at a time to strong Constitutions, to purge according to the disposition of the humours, some times upward, but never failing downward; searching afterwards for the Pill, and washing it, to serve as often as need requires, where the Patient has no aversion to it. As for the Goblets, or Cups, they may be fill'd with *Spanish* Wine, or other Wine, or any other Liqueur, and leaving them cover'd with a Trencher from night till morning, the Liqueur may be given to strong Constitutions that desire to purge upward and downward. And these Goblets or Cups will communicate their Purgative and Emetick quality, as long as you shall desire without any sensible diminution of their weight, or manifest change of their substance.

Regulus of Antimony is very seldom given alone in powder, it being sufficient to make Bowles or Cups of it; but it is often mix'd with other Minerals or Metallick substances in order to many other Chymical preparations, of which I have already shew'd some, and shall shew more examples.

You may powder the dross of Regulus, and having boil'd it for some time in a good quantity of water, filter the decoction, then having pour'd upon it Vinegar distill'd, precipitate a yellow substance, which is call'd *Golden Sulphur of Antimony*, to which some have allow'd only a diaphoretick virtue, though it chiefly work by vomit and by stool. You may afterwards dulcify this precipitate in several Lotions, dry it, and give it from three or four to five or six grains, mix'd with some other medicine adapted to its operation. But the use of it is rare, and the yellow stains that remain in the hands of them that prepare it, make them unwilling to take the trouble upon them.

CHAP. LXXVII. Of Martial Regulus.

THE mixture of the pure substance of Mars, with Regulus of Antimony, has given this Regulus the name of Martial, the preparation whereof is thus: Heat red hot in a Coal-fire a good Crucible well cover'd, then throwing into it half a pound of the points of Horseshoe-nails, return the Cover upon the Crucible, and increase and continue the fire till the red hot nails look white again; then cast upon them a pound of Antimony in powder, which melting soon after, will cause the Iron also to melt, keeping the Crucible cover'd, and forcing the fire. When the substances are melted, cast upon them at several times, about three or four ounces in all of Niter in powder, as well to separate the dross of the Iron and Antimony, as to make the fusion more clear. Then having heated and greas'd an Antimonial Cornute or Horn within side, pour the melted substances into it, knocking the sides of the Horn, to make all the Regulus descend to the bottom, and when the whole is cold, turn the Horn an end, and you shall find the Regulus cover'd with the dross, which you must separate with a hammer: After which having cleans'd it and remelted it in a Crucible, cast upon it three ounces of Antimony in powder, forcing the fire that they may be all well melted together; afterwards having added by degrees about two or three ounces of powder of Niter to separate the remaining Scories of Mars, and to hasten and clarify the fusion of the Metals, pour them into an Iron Horn heated and greas'd within, proceeding in all things as before, and by this means you shall have a Martial Regulus clean and starry, provided you have been exact in the operation, and that the substances be perfectly well melted when you pour them into the Horn, upon which mistake you must remelt the Regulus, and add to it two or three ounces of Niter more, the better to refine it.

The Antimony us'd in this preparation affords, proportionable to its quantity much more Regulus than in the former, because not only the Mars hinders the dissipation, which would otherwise happen of several particles of Antimony, but also augments its quantity by joining with it its own pure parts in the fusion; besides the Niter cannot make so great a dissipation as in the preceding Regulus, because it is here us'd more late, and for that it is mix'd but by degrees, and in a small quantity. Though should you continue to mix it, it might at length consume all the Mars, and change the qualities of the Antimony, rendering it diaphoretick.

You may make Cups and Bowles of this Regulus, as of the former, and their effects are much the same, but they are less violent because of the addition of Mars with the Regulus of Antimony, which would at length reduce the Mars all into dross, were they kept long together upon the fire.

Some prepare a Regulus without the addition of Salts: They beat the Antimony into gross powder, and having put it into a Crucible, and cover'd it with powder of Coal four or five fingers high, they expose it to a melting fire for half an hour,

hour, then the substances being cold, they find at the bottom a Regulus separated from the dross, which they afterwards put into a new Crucible, and having cover'd it with more powder of Coal, and expos'd it to a melting fire for a quarter of an hour, they still draw forth more Regulus, and putting the Scories a third time into another Crucible with more new powder of Coals, they melt them again to extract a third Regulus. And thus out of a pound of Antimony they draw out about three quarters of Regulus. But the Regulus thus extracted is very impure, and full of several gross parts of the Antimony; for it has neither the whiteness, lustre, nor beauty of a Regulus well prepar'd; only it may be accounted an Antimony a little purer than ordinary.

CHAP. LXXVIII.

Of Flowers of Antimony.

VARIOUS instruments are us'd, and various methods follow'd for the preparation of Antimony; for you may make use of ordinary Aludels, cover'd with their Pots bor'd through above and below; of which the uppermost hole of the uppermost pot must be very little; and having plac'd the Aludel in a proper Furnace, and made the bottom of it almost red hot, project by degrees into the body of the Aludel through its hole, powder of Antimony, and having stopp'd the whole, cause the flowers to rise into the pots of the Aludel, continuing the fire and projection of the powder of Antimony, till you have flowers enough. You may also, following *Zwelfers* way, make use of an Aludel made almost like a Bowl, having two pipes, one of each side of the middle, and the lower part somewhat more flattened than the upper. Then put a little powder of Antimony into it, place the Aludel in a proper Furnace, and kindle under the Aludel a fire sufficient to melt the Antimony; which done, slightly fit to one of the Pipes of the Aludel a Recipient having a little hole in the hinder part, and when the vapours begin to appear in the Recipient, blow gently with a small pair of Bellows into the opposite pipe to that fitted to the Recipient, to the end that the vapours being forc'd into the Recipient may condense there in flowers. But for as much as the Antimony alone does not freely afford its flowers, unless you be very exact to govern the fire, and in managing the powder, you shall have better success by mingling forraign substances with the Antimony, as well to divide its parts and hinder their melting in the Aludel, as to make the particles ascend in flowers; to which purpose the first Aludel is more proper than the last.

You may mix the Antimony with double its weight in Sand or powder of Glass, and having plac'd the Aludel in a proper Furnace, and cover'd it with its pots luted one above another, make the lower part of the Aludel red hot, and project about half an ounce of the powder at a time into the hole, stopping it at the same time, continuing always a good fire under the Aludel, and continuing to project the powder till it be all spent. You may also very properly, instead of Sand or powder of Glass mix with Antimony in powder, treble its weight of Niter in powder likewise, and project and fulminate the powder by little parcels in the Aludel cover'd with two or three pots, and the uppermost with a Glass head, not luted, fitted with a Recipient; and by this means cause the most volatile parts of the Antimony to ascend in Flowers; which you shall find in the pots or in the head when the Vessels are cold and unluted. You shall find in the Recipient at the same time a Spirit of Niter very acid, & at the bottom of the Aludel the most fix'd part of the Antimony, mix'd with the fix'd Salt part of the Niter. Then dulcify the flowers by several Lotions, afterwards dry them and keep them, to be given from three or four to five or six grains in some Conserve or Sweetmeat, when you would purge upward & downward evil humours, in intermitting Agues, Hypochondriacal Maladies, and other obstinate diseases. The Spirit in the Recipient is very useful against Colicks and difficulties of Urine, given from five or six to twelve or fifteen drops, or to a pleasing acidity in Broths or other Liquors proper to be given. As for that which remains at the bottom of the Aludel, being a real

Diaphoretick Antimony, having taken it out of the Vessel, cleanse it from the Salt part of the Niter, and use it for the same uses as the ordinary Diaphoretick Antimony.

You may mingle very properly half a pound of powder of Antimony with a pound of Sal-Ammoniack, put them together into an Earthen Cucurbit fit to resist the fire. Then having plac'd the Cucurbit in a proper Furnace, and cover'd it with a Glass-head, sublimate the Flowers with a Gradual fire, and when the Vessels are cold, scrape off the red Flowers from the head; Dulcify them with several Lotions, dry them and keep them for the same Uses as those which precede.

You may also make use of Glasses, Saffrons and Regulus's of Antimony to extract, proceeding after the same manner as with raw Antimony. The diversity that happens to Flowers of Antimony in several, or the same preparations, or in the same Sublimations, not changing their vomitive and purgative qualities, you may make use of all alike, red, yellow, or white, provided they be well wash'd and dulcify'd. Sometimes a grain of these Flowers is mix'd among other Purgatives, or with Mercurius Dulcis upon certain occasion. For then serving as a Spur to the remedies among which it is mix'd, it assists their activity, working only downwards. Mercurius Dulcis is also a good Corrective of Antimony. I omit the Correction of these Flowers by Salt-Tartar well impregnated with the acid of the Spirit of Vinegar, or by the Cohobation of Spirit of Wine aromatiz'd, or by the of Spirit of Wine mollify'd, or by other ways set down in Authors, not seeing any necessity to insert them here, since you may upon the place correct and change the activity of the Flowers by mixing them with other Medicines.

CHAP LXXIX.

Of Diaphoretick Antimony.

THE most part of Authors agree that there must be three parts of Niter for one of Antimony put for this preparation. But some would have all the Niter mix'd at once with the Antimony; others but two parts; others but one part, adding successively the other two to the Mass. But though the event of all these preparations does not much differ, provided that making use of three times the weight of the Antimony in Niter, you proceed in all things as you ought to do; nevertheless I think it much better not to mix at the beginning above a third part of the Niter with all the Antimony; for if you make use of all the Niter, the Fulmination being much more violent, makes a greater dissipation of the Antimony, and also of the volatile parts of the Niter, which have not time to contribute their part, to fix the rest of the Antimony remaining in the Crucible. Whereas if you put in no more Niter than Antimony, the Fulmination being violent enough, to raise the Gross Sulphur of the Antimony, though not able to dissipate the volatile parts, and that adding after to these parts of the Antimony, and not causing any more fulmination, because the impure part of the Antimony is consum'd, the Spiritous and fix'd parts of the Niter have all the time requir'd to act upon the Antimony, and to change the vomitive and purgative qualities into Diaphoretick; which is a quality as it were inseparable from this Mineral.

Break then to powder and mix a pound of good Antimony with a pound of Niter well purify'd, and put the powder into Cornets of Paper containing about an ounce each. Then having plac'd a good Crucible with its cover upon a Culot in the midst of a Fire-place of a Wind Furnace, kindled a good Coal-fire round about, and made the Crucible red-hot, throw in first one of the Cornets, covering the Crucible at the same time, and leaving the powder to Fulminate. After which project one Cornet after another, and to leave them to Fulminate till the whole is projected, continuing always a good fire to keep the substances in Fusion. Then add by degrees and at several times all the rest of the Niter, which you must mingle and incorporate with the Mass, stirring it with a long Iron-Spatula, and keeping still a good

good fire for two or three hours, or till the Antimony and the Niter have lost their Fluidity, and are, reduc'd in the Crucible into a white and solid Mass. After which when the Vessels are cold, and that you have taken away all the filth that sticks about, or in the Crucible, break the substances with a hammer into four pieces, and having put them into a long Tin Platter, pour upon them the boiling water, till they are quite cover'd over, and there let them lye and soak till the Mass be separated from the Crucible, and in part soften'd. Then throwing away the pieces of the Crucible, let the matters settle, pour out the Liquor by Inclination, and keep it apart. Then put the Calx of Antimony into a Marble Mortar, and bruise it with a wooden pestle: after that having pour'd upon it some pints of Water, and well stirr'd, pour the thick Liquor presently by Inclination into a clean Earthen pot, continuing afterwards to beat and soften the Calx of Antimony in clean water, and still to pour out the thick water as before, till this lime be all soften'd in the water, and that you perceive nothing but some useless Terrestreties at the bottom of the Mortar. Then wash this lime with many Waters, till it be perfectly Dulcify'd, and having well dry'd it, put it into a Crucible, and hold it over the fire for two or three hours; and having burnt over it good Spirit of Wine, keep it in a pot or in a double glass bottle for use.

The first Liquor Sand, is of good advantage, containing in it much of Niter, and several particles of the Calx of Antimony which the same Niter has dissolv'd, for you may evaporate it to a film, and draw from it Crystals of Niter impregnated with the Antimony. Or else pouring Spirit of Vinegar upon the Liquor, precipitate a Magistery very white and very slender, which proceeding from the same Mass is endu'd with the same vertues; and you may make use of it as of the Calx of Antimony, having well wash'd and dry'd it. The whiteness of the Calx of Antimony is the reason that they have given it the name *Ceruse*: but it is more commonly call'd *Diaphoretick Antimony*, or Mineral Diaphoretick. And that because that while it fortifies nature, it disposes it, to expel the ill humours by all sorts of ways, and chiefly by sweat or insensible transpiration. It is also very proper to mortify Corrosive Salts, especially acids, and to prevent fermentation of the humours, the corruption whereof it also hinders. It cleanses the whole Mass of the blood, and gives wonderful relief in Scorbutick Maladies, if you continue the use of it, for some time. And though it may seem astringent, as well in regard of its substance altogether terrestrial, and because it is disabl'd from purging either upwards or downwards, nevertheless it is mix'd very appositely with purgative and opening Medicines. For by assisting their activity, it hinders the bad Impressions which they might make upon the parts. For which cause it is often mix'd with remedies prescrib'd to open obstructions of the bowels and Matrix. It is very much esteem'd against the Malignity of Fevers, particularly against the small Pox, and all sorts of Meazles, as also in the cure of Venereal distempers, mixing it with all Remedies made use of for that purpose as well purgative as Diaphoretick. It is given to all sorts of Sexes and ages, from five or six to twenty or thirty grains, as also the Magistery mention'd, either alone or mix'd with other Remedies.

You may dissolve the Crystals drawn from the first Lotion of Antimony Diaphoretick in proper Liquors, and give them from five or six to fifteen or twenty grains, for the same Maladies, as Diaphoretick Antimony.

You may make use of the Glasses, Saffrons Regulus's and Flowers, instead of ordinary Antimony, and fixing their vomitive and purgative qualities, render them Diaphoretick, adding to them three times as much the weight of fair Niter, and observing the same directions as for Diaphoretick Antimony.

CHAP. LXXX.

Of the Icy Liquor of Antimony.

FOR this preparation usually they take equal parts of good Antimony and Corrosive Sublimate, and having beaten them in a Mortar, and put them into a Glass Retort well luted about, and having a large neck, place it in a close Furnace of Reverberation proportionable to its bigness: then having kindl'd a very small fire in the fire-hearth of the Furnace, and slightly fitted a half *Ballon* to the neck of the Cornute, begin your Distillation with a very soft fire, and in a little time you shall perceive a very white Liquor drop into the Recipient, clear also, but very heavy, which will coagulate immediately in the form of Ice. You must not increase the fire till all the clear Liquor be distill'd; and if it happen that any of the distill'd Liquor congeal in the neck of the Retort, you must force it to melt and fall into the Recipient, by holding a lighted Coal, and giving a gentle heat to the place where it lyes. But when you perceive any blackness to appear in the neck of the Cornute, or of the half *Ballon*, slightly fit a new Recipient to the beak of the Retort, and begin to augment the fire, which you shall force by little and little, and by degree from degree, till you come at length to continue it very fierce, to separate from the substances that remain in the Cornute, the *Mercury* conceal'd in the Sublimate, and to cause it to ascend with the proper Sulphur of Antimony, and stay almost all like Cinnabar, in the neck of the Retort, and sometime after to distil in flowing Quick-silver into the Recipient, mix'd with some Fuliginous parts of the Antimony.

The Vessels being cold, you shall find at the bottom of the Cornute a hard shining Mass, very much like the Antimony made use of in this operation, and at the same time at the top and in the neck of the Cornute, the Quick-silver of the Sublimate united with the terrestrial Sulphur of the Antimony and incorporated with it in Cinnabar. You shall also find in the last Recipient some little Quick-silver reviv'd, mingl'd with some Soot of Antimony, and in the first the Icy Liquor, which will have no need of Rectification; if the fire were well govern'd, and the Recipient chang'd in good time. But if there be any Clouds or obscurities in it, you must cause it to melt again by heating the Recipient by little and little, and having pour'd it into a small Glass Cornute, rectify them in a Sand-bath with a very gentle fire, till all that obscure matter which was in the Cornute become a white and very pure Liquor, which is call'd the Gummy liquid Butter, or Icy oil of Antimony.

The ordinary *Regulus* of Antimony, or the Martial *Regulus* may be made use of in this preparation, and double the weight of it in Sublimate Corrosive added to it, and observing the same Rules as for the preceding distillation, a Liquor may be obtain'd very like the former, and by some better esteem'd because of the Refinement of the *Regulus* from whence it was drawn. But the difference is not very considerable, because the acid Salts of the Corrosive Sublimate, do not principally act but upon the *Regulous* part of the Antimony, and by consequence, the Liquor which distills from it, cannot but be very near in likeness to it. So that the best way will be to keep to the first Preparation, considering that besides that the *Regulus* costs more then the ordinary Antimony, you must employ double its weight of Sublimate, and that afterwards you cannot extract a Cinnabar, as you may, making use of Raw Antimony.

We may say that among Minerals Antimony is that which furnishes Chymistry with the greatest number of preparations; we may also affirm as well, that the Distillation of Butter of Antimony, is as it were the Source of a good number of preparations; and therefore it deserves that we should make some Reflexions upon it, to the end we may understand the reason of all the changes that happen to Antimony.

In the first place we must believe, that the Acid part of Vitriol and Bay-salt, which make one part of the Substance of Corrosive Sublimate, are the Dissolvers and the Melters of the *Reguline* part of Antimony and that they are united with it in Distillation. We are to understand also that the Mercury has no part in the dissolution, because

cause we may have an Icy liquor of Antimony, by distilling this liquor through a Retort, and mixing it before with its weight of Vitriol calcin'd white, and as much decrepitated Salt in powder; that a liquor of the same nature may be had, by drawing a Spirit from equal parts of decrepitated Salt, and Vitriol calcin'd white, and mixing two pints of this Spirit with a pound and a half of powder of Antimony, and distilling them through a Cornute in a Sand-bath; and that you may yet be more successful, by mingling two parts of ordinary water with one part of powder of Antimony, and distilling them together, without ever having mix'd any Sublimate Corrosive, or any Quicksilver in any of these distillations.

In the second place, though the powder separated from this Icy liquor after precipitation, washing, and drying, be call'd *Mercury of Life*, it is not to be thought, that the Quicksilver, which makes the greatest part of the Sublimate Corrosive, mix'd equally with the Antimony is the ground of it, or that it makes one part of it; if the fire were govern'd right at the time of the distillation, or if by forcing the fire the reviv'd Quicksilver be not forc'd to descend into the Recipient.

But having proceeded right, certain it is, that the whole substance of the liquor consists only of the acid parts of Vitriol and Bay-Salt, and the *Regulus* part of the Antimony, which the acid parts of those Salts have dissolv'd, which is every way demonstrable; whether it be by converting into a true *Regulus*, or Glass, the Antimonial substance conceal'd in the liquor; or by drawing from the mass remaining in the Retort, all the Quicksilver of the Sublimate Corrosive, converted into Cinnabar and reviv'd, or whether by dissolving in water the acid part of Vitriol and Bay-Salt contain'd in the liquor, and separating it from the substance Antimonial.

In the third place we must consider, that the heat of the fire, giving a kind of fusion to the Sublimate, and by that means an opportunity to the Mercury to resume its first form, and easily converting into liquor the acid part of the Salts, which were confusedly mix'd with the parts of the Mercury, after they had divided them at the time of the sublimation; the same liquor, finding the *Reguline* substance of the Antimony more fit for penetration of its points, fastens upon it, divides its parts, dissolves them, and makes a calcination thereof, which may be call'd *Immersive*; and afterwards being forc'd by the fire, it comes forth in liquor at the beak of the Retort, with the substance which it had dissolv'd and calcin'd, falling with it drop by drop into the Recipient, and leaving in the Retort the Mercury with the grosser part of the Antimony. And because the natural combustible Sulphur of the Antimony resides then in the Cornute with the other gross parts of the Antimony, they sublime together, and you find them after distillation incorporated with the Cinnabar in the neck of the Cornute; not but that there is some of the flowing Mercury to be found in the Recipient, because there was not Sulphur of Antimony enough to stop it. For the same reason there is no expectation of Cinnabar, when *Regulus* or Glass is made use of for the preparing of Icy liquor; for then being depriv'd of all their terrestrial Sulphur, the Mercury not finding any substance proper to fix to, is constrain'd by the fire to quit the Cornute in the same form before it was sublim'd.

Cinnabar of Antimony is not only of great efficacy in the cure of Venereal distempers; but the best Authors look upon it as a very particular remedy against the Epilepsie, giving it from ten or twelve, to fifteen or twenty grains in Bolus among other Cephalick remedies.

As for the Icy liquor, in regard it is very caustick, while it is so, it is only for external uses, as well to cauterize and eat off superfluities of the flesh, consume and take away the rottenness of the bones, as to stop Gangrenes. But because the violence of its effects require great wariness, *Monsieur D'Aquin* was desirous that I should impart to publick view, how *Monsieur Pelegrinus*, Physician at *Romans* in the Dauphinate, makes use of this liquor with good success upon several occasions, and in many experiments made before *Monsieur D'Aquin*, of many of which I myself was a witness.

CHAP. LXXXI.

How Monsieur Pelegrin uses the Icy Liquor of Antimony, and the various effects which may be expected from it.

Mingle an ounce of Icy Liquor of Antimony with two ounces of Oil of Sulphur distill'd by the Bell, and keep them together in a Bottle by itself.

Mix in an Earthen pot varnish'd within an ounce of Icy Liquor of Antimony with two ounces of Corrosive Sublimate in powder, stirring them with a woodd'n Spatula, and after you have wash'd them ten or twelve hours in that condition, evaporate the superfluous moisture with a gentle heat, to the dryness of the powder, and keep it in a double glass bottle close stopp'd.

To stop a Gangrene at the beginning, first Scarify the Gangren'd part to the quick, then apply the Liquor or the powder between the live and the dead flesh, putting in more or less according to the condition of the source, letting it lye ten or twelve hours. But if the pains be too vehement, before the time is expir'd, apply the suppurating and pain-easing Ointment, hereafter prescrib'd: then continue the application twice a day, as well to separate the Scab from the live flesh, as to incarnate and cicatrize the wound afterwards: for which purpose at length apply rolls of Lint dry, and over them a Cere-cloth of Diapalma Ceruse and Minion dissolv'd in Oil of Roses.

For the preparation of the Suppurative and Anodine Ointment, take Oil of Roses, Lillies and flowers of Elder of each two ounces, Mutton and Veal suet of each half a pound, powder of Myrrh and Olibanum of each an ounce and an half, one pound of black pitch, half a pound of clear Turpentine, six ounces of yellow wax, two ounces of distill'd oil of Rosemary, and as much oil of Lavender, and make an Ointment according to Art.

To heal Ulcers that cause rottenness of the bones, anoint their edges with the Liquor above describ'd, and pour upon the Rotten bone at the bottom of the Ulcer some drops of it, pouring on more or less according to the largeness of the Rotten place; then cover the Ulcer with Rolls of white dry'd Linnen, and let them lye ten or twelve hours. After which, having taken off the Rolls, put on others anointed with the Anodine Ointment, but lay nothing upon the bones, but the dry Rolls, and when the Scab is parted from the live flesh, having scrap'd the bone with a proper Instrument, and having taken away all the brok'n splinters, fill the whole Ulcer with dry and warm Rolls, renewing them twice, a day leaving upon them the Divine Emplaster soften'd with Oil of Turpentine, and so continuing to the end of the Cure.

To extirpate Fistula's, thrust into the pipe of the Fistula a pipe dipt in this Liquor, but if you cannot get in a tent, put in never so small a drop with the end of a small Syringe, then having cover'd the part with a fold of Linnen, leave it so all the day. After that draw forth the Tent, and dress the Fistula twice a day with the Anodine Ointment, till it be well incarnated, applying at the end a drying Cere-cloth.

To heal Cankers at the beginning, make an Incision like a Cross to the bottom of the hardness, and pour upon it four or five drops of this Liquor: afterwards cover the Canker with dry Rolls and folded Linnen, and let the patient keep his bed twenty four hours, giving him only Broths for nourishment. After which take off the Rolls, and put others in their room. Then dress the wound twice a day, and continue dressing till the Scab being fallen off, and the wound incarnated, it may be time to lay on the desiccating Cere-cloth. If the Cancer be ulcerated, cut off nothing but the hard and black blew brims of the Cancer, and drop some drops of the Liquor upon the Scarify'd part to take away the hardness; and drop more of the Liquor upon it, if there were not enough at first.

The same Method is to be observ'd for the cure of Wolves.

To

To take away Warts, Wens, and other excrescences against nature, dip a silk-string in the liquor, and tie it about the excrescence, if it may be done, and leave it so ty'd for twelve hours, till the excrescence fall off of it self, then apply a desiccative Cerecloth upon it; but if you cannot come at the excrescence to tie it, touch it with the end of a syringe dipp'd in the liquor, and put upon the top of it a little of the powder, covering the part with a dry fold of linnen, which must be chang'd twice a day till the excrescence be fallen off, and then applying a desiccative Cerecloth to it.

To heal cancerous, venereal Ulcers; moisten the end of a syringe with a little spittle, and having put a little powder upon it, touch the cancerous Ulcer with it, though there were a rottenness of the bone besides; then cover the sore with dry linnen folds, and leave it so for a whole day. But if the Patient cannot endure the pain, take off the dry linnen folds, and lay in their places others spread with the Anodyne ointment. Then dress the sore twice a day with the ointment, till the scab be fallen off, then apply only folded linnen and little pillows upon them. If there be any inflammation, lay *Garter's* Cerecloth to it. But the use of this remedy does not hinder, but that you may use general Medecines to carry off the cause of the distemper.

CHAP. LXXXII.

Of the Emetick Powder, Philosophical Spirit of Vitriol and Mineral Bezoar.

THe caustick quality of the icy liquor of Antimony proceeding only from the acid part of the Vitriol and Salt Marine conceal'd in the sublimate corrosive made use of in the preparation of this liquor, and that part being to be dissolv'd in water, it is no hard thing to separate it, nor necessary to make use of precipitants to make the reguline substance of the Antimony descend to the bottom, which being the principal part of the liquor, is not dissolvable in water like the Salts; in regard that by steeping the acids in a good quantity of water, they become so far weaken'd, that they are constrain'd to quit the Antimonial part which they had dissolv'd and reduc'd to liquor. And therefore because there is more use to be made of the Emetick, Purgative, and Diaphoretick qualities of the Antimonial part of this liquor, then of the corrosive of the acid Salts which keep the Antimony in dissolution, it is necessary to know how to separate them.

Melt in a *Balneum Maria* luke-warm the icy liquor of Antimony mention'd, which shall be found in the Recipient, and having put it into a clean earthen-pot glaz'd within, pour upon it twelve times the weight of fair water luke-warm and filter'd, the mixture whereof will make a very white milk, then having well soak'd, and stirr'd the substances with a wooden Spatula, let them settle for two or three hours. After which pour out by inclination the clear liquor, and preserve it in a bottle: wash the Antimonial substance that lies at the bottom with several fair waters, till it be perfectly dulcis'd. Then dry it in the shade, and having powder'd it in a glass or marblè Mortar, put it in a double glass-bottle close stopp'd.

This Powder bears the name of *Algarozs*, the Author of it, or of *Emetick*, for its effects; and of *Mercury* of life, though vainly, for the reasons already alledged.

The principal qualities of it are to purge vigorously upwards and downwards all bad humors, giving it in Bolus from two or three to five or six grains or more, in some conserve, or in some other proper matter, or mixing it with other purgatives, and accommodating it to their nature. It is made use of very advantageously in Dropsies, in intermitting Fevers, and in all diseases of the stomach and matrix, which proceed from abundance of humors.

The first liquor, which you shall have receiv'd, containing in it the acid part of the Glacial Oil, is of a very acid savour. But its acidity will much encrease, if you

cause the liquor to concenter in a Sand-Bath, by which means you shall have that which writers call the spirit of Vitriol Philosophick, evaporating the greatest part of the moisture: as well by reason of the acid part of the Vitriol, which is its principal substance, as also for that it has almost the taste and qualities. For which reason it is giv'n inwardly, as the ordinary spirit of Vitriol; this spirit being a friend of nature, whereas the acids whereof it is compos'd, were destructive to it, so long as they were concenter'd with the reguline part of the Antimony.

The effects of Emetick powder may be qualifi'd, and so order'd, that they may only purge by stool, by putting it into a small Glass-Cucurbit, and placing it in a Sand-Bath over a very gentle fire. Then leave it there till it begins to grow red, and pour upon it, two or three times, spirit of Wine well rectifi'd, and draw it off as many times. This powder may be given to the same dose as the ordinary Emetick, and is call'd Emetick corrected.

But to deprive this powder absolutely of its purging faculty either upwards or downwards, and to change it into Diaphoretick, proceed thus. Put the quantity of powder you intend into a small Glass-Cucurbit plac'd in a Sand-Bath, and having pour'd upon it three times as much the weight of spirit of Niter, stirr'd it with a wooden Spatula, and steep'd it well in the spirit, evaporate all the moisture, till there remain only a white dry mass at the bottom of the Cucurbit. Then having wash'd and perfectly dulcifi'd it, keep the powder in a glass-bottel perfectly well stopp'd. This powder bears the name of *Bezoar Mineral*, as well for its Bezoardick qualities, as for that the substance of it is altogether mineral. This Bezoar is given to good purpose in all diseases where the Bezoar drawn from the Animal is ordinarily us'd. It strengthens very much all the noble parts, and defends them against poison. It purifies the mass of the blood, and drives from thence, as well as out of the whole habit of the body all those sharp serosities that are proper to be expell'd through the pores of the body, driving them forth by sweat or by insensible transpiration. For which reason it is very highly commended against all diseases proceeding from corruption or depravation of the blood, chiefly in the Scurvy, the Pestilence, the Small-Pox, the Meazels, and all sorts of Epidemick distempers. The weight of it causing it to descend to the bottom of the liquors, is the reason that it is only given in Bolus, from eight or ten, to twenty or thirty grains, mix'd with conserve, or some other proper matter. It may be mingl'd with Purgatives and Aperatives to fortify the noble parts during their operation.

CHAP. LXXXIII.

Of Sulphur of Antimony.

This Sulphur is not to be taken for that Sulphur which is look'd upon as one of the Principles of Antimony, and which being strictly united with its most pure parts, is as it were inseparable from it. I only intend to shew the extraction of the terrenal and combustible Sulphur of Antimony, which often appears in a blue flame, chiefly when you calcine the powder of Antimony for the preparation of Glass, or which is incorporated with extraneous substances, when after the distillation of the Glacial Oil of Antimony you sublime the Mercury in Cinnabar, and that the combustible sulphur of Antimony is united with it. The impossibility of making any advantage of Sulphur that burns during the calcination of the powder of Antimony, prevents my attempting it; but the sulphur contain'd in the Cinnabar of Antimony, engages me to set down the way to separate it to good profit: though there are other ways to separate a pure sulphur of raw Antimony, especially being in the same condition as it was in the mine.

Make a strong lye with good wood-ashes, quick-lime, and ashes made of the burnt lees of Wine, and put into a glaz'd earthen-pot a pound of Cinnabar in powder; fill the pot almost full of this lye, and boyl the whole for three or four hours, pouring from time to time new lye into the pot in the place of that which is consumed. Then having filter'd the hot liquor, and sav'd the reviv'd Mercury which

will

will lie at the bottom, you may, if you please, pour upon the liquor distill'd vinegar, to hasten the precipitation of the sulphur: or else suffering the filter'd liquor to cool, stay till the sulphur of Cinnabar, which is that of Antimony, be precipitated of its self to the bottom of the vessel. After which, wash it with several waters, till it be perfectly dulcify'd; and having dry'd it, put it up in a double glass-bottle, perfectly well stopp'd.

This Sulphur is given from two to three or four grains, and violently purges upwards and downwards all sorts of bad humours; like the golden Sulphur drawn from the Faces of Crocus Metallorum. And therefore it is very rarely given alone: some choosing rather to prepare an *All heal*, mixing it with an ounce of Regulus of Antimony finely powder'd, and three ounces of Oil of Sulphur, or Spirit of Vitriol both well rectify'd, letting them digest together for eight days, distilling and cohobating them three times in a Retort in a Sand-bath, and increasing the fire at length for twelve hours, the better to fix the substance, which afterwards they wash with Rose-water till it be exactly dulcify'd; drying it afterwards, and giving it from ten, to twelve, fifteen or twenty grains; to purify the Mass of the blood by sweat, or by insensible Transpiration. Others not thus satisfy'd, after they have broken the Cornute, reverberate the substance for five or six hours, and having well wash'd, dry'd and powder'd it, mingle with it twice the weight of Magistery of Pearl or Coral, before they administer it.

CHAP. LXXXIV.

Of some particular Preparations of Antimony.

PUT a pound of powder of Antimony into a Glass Cucurbit under a Chimney, and having pour'd upon it its full weight in Regal water, leave the water to act, till it have quite dissolv'd the Antimony. Then having plac'd the Cucurbit in a Sand-bath, and cover'd it with its head, draw off the Regal water to the dryness of the substance. After which having finely powder'd the Mass, and mix'd it with a pound of powder of Salt-Ammoniack, put this into a glass Cucurbit, cover'd with his Alembick, and having fitted a small Recipient to the neck, and carefully luted the closures, place the Cucurbit in a Sand bath in a proper Capsula, and kindle a gentle fire under it. Upon which, a good part of the Antimony will sublime in Flowers, part in the head, and part at the top of the Cucurbit, with the volatile part of the Salt Ammoniack. The Sublimation being over, and the Vessels cold and unluted, you shall find the flowers of a different colour: thereupon having scrap'd them together, and beaten them and mix'd them with that which remains in the Cucurbit, make a new Sublimation, proceeding in all things as before, and repeat the same operations twice again. Then having scrap'd together all that is sublim'd, separate the Salt part by several Lotions, till the powder of Antimony be perfectly dulcify'd. Dry it, and keep it for use.

This powder works by stool. It purges gently all bad humours, giving it from two or three, to four or five grains, in a roasted Apple, or some Conserve or Confection.

You may also grind upon Porphyry what quantity you please of glass of Antimony, prepar'd as I have said without addition, and having moisten'd it with Spirit of Vinegar dry the Mass in the Sun: then grind it again, moisten it with Spirit of Vinegar, and dry it again in the Sun, and so continue to do, till the powder be perfectly white. Then having put this powder into a glass Cucurbit, and pour'd upon it Spirit of Wine well rectify'd, about three or four fingers above the substances, place the Cucurbit in a Sand-bath, and cover it with its head furnish'd with a small Recipient; and having well luted the closures, draw forth the Spirit of Vinegar with a soft fire, to the dryness of the powder which you must put up.

This powder does not provoke vomiting, working generally by stool, and sometimes by sweat, according as the humours are dispos'd. The dose is the same with the former. It is us'd with success in intermitting Fevers.

You may extract a Tincture from glass of Antimony finely ground, and put into a Matraſs, pouring upon it ten times the weight of oil of Amber well rectify'd, or oil of Turpentine or Juniper-berries. Then having cover'd the Matraſs with a blind-head, and carefully luted the cloſures, place it in a Sand-bath, and diſſolve the ſubſtances with a ſtrong heat, ſo that the Liquor may ſeem almoſt ready to boil; and continue it till it be very deep colour'd. This Tincture works by ſtool or by ſweat. The doſe is from two or three, to four or five drops in ſome proper Liquor.

You may alſo prepare an Antimonial Purgative Rob, and not Vomitive, according to the following Method. Put into a large Matraſs half a pound of powder of Antimony, and having pour'd upon it fix pound of Juice of Quinces well depurated, and put a Cork Stopper into the mouth of the Matraſs, let them macerate for three weeks over a Bakers Oven, ſtirring the Ingredients from time to time. Then having put the Matraſs in a Sand-bath heated ſomewhat more then for ordinary diſſolutions, leave it there four and twenty hours. Filter this Liquor, and evaporate the ſuperfluous moiſture, to the conſiſtence of a Rob: which may be given from two drams to a whole ounce.

You may alſo prepare an Antimonial Liquor as ſweet as Honey, in this manner. Grind upon a Porphyry half a pound of raw Antimony, with ſimple Oxymel; till the Antimony be exactly powder'd. Then put this mixture into a Glaſs Cucurbit, and with a Blind-head, lute the cloſures; and leave it for a whole month upon a Bakers Oven, to give the Spirit of Vinegar time to penetrate the ſubſtance of the Antimony, then ſet the Cucurbit in a Sand-bath, hotter then for ordinary diſſolutions: and letting it ſtand there four and twenty hours, cool the ſubſtances, and pour out the Liquor by Inclination into another Cucurbit, and ſet it in a Sand-bath, cover'd with its head fitted with a Recipient, with the cloſures well luted. Then draw off with a Gradual fire, firſt a Flegm, then a red Liquor more ſweet then Honey, which purges gently, given in ſome proper water from a Scruple to a dram.

There is alſo another Liquor of Antimony which is call'd the *Honeyed Liquor*, which is thus to be prepar'd. Macerate for fifteen days over a Bakers Oven one pound of powder of Antimony, with four pints of pure honey, ſtirring them from time to time; then boil them over a gentle fire, ſtirring them continually with a Spatula, till the whole be as thick as Pitch, and will crumble between the fingers. That done, put the Maſs into a Retort of Potters-earth luted about; place the Retort in a cloſe Furnace of Reverberation, and fit a large Ball to the neck; by this means with a fire well graduated for 24 hours, you ſhall draw forth a Liquor impregnated with ſeveral particles of the Antimony, and with it ſome flowers, which muſt be ſeparated, and will be both vomitive and purgative, almoſt like the other flowers of Antimony.

This Liquor is penetrating and corroſive, and very proper not only to cleanſe Ulcers, but alſo to conſume their ſuperfluities and Excreſcencies. It is commended againſt Gangrenes. It is uſ'd alone or mix'd with Mel Roſatum, Decoctions, Tinctures, Liniments and other Remedies.

Some there are that beat equal parts of Antimony, Sugar-Candy, and Allum burnt, and having mixt them well, and put them into a Retort of Potters earth luted about, plac'd the Retort in a cloſe Furnace of Reverberation, fitted a large Recipient to the neck, and luted the jointures, draw off by a gradual fire, but well govern'd, a red liquor which is highly eſteem'd for the cure of all Ulcers.

Theſe are the moſt neceſſary and moſt in uſe, for other preparations I refer the Curious to *Baſilius Valentinus*, *Schroder*, and others who have treated more amply of them, then it was my deſign to do.

CHAP. LXXXV.

Of the Preparations of Bismuth.

Bismuth is a Mineral body half Metallick compos'd of the first Matter, but still imperfect, of Tin, join'd with a Terrestrial Sulphur and Mercury ill digested, and mix'd with much impure Arsenical Salt, and produc'd in the Mines of this Metal at the time of its generation. The substance of Bismuth is very hard, eager, and brittle, of a coarse grain, smooth, white and glittering; it is usually call'd Tin of Ice, because it contains much Tin; and when it is broken, it appears in little small substances like Ice. But Authors have also given it the name of the Marcasite for excellency, because it surpasses all other Marcasites in whiteness and beauty.

The natural Arsenical Salt, which makes one part of the Composition of Bismuth, is the reason it is never prepar'd to be taken inwardly, but only for outward applications, for which the Magistery is chiefly us'd. For the preparation of which, having distill'd an *Aqua-Fortis* with equal parts of Niter and Sea-Salt, or with the like quantity of Niter and Sea-salt, or with the like quantity of Niter and Alum; beaten and wash'd the Bismuth till the water come from it very clear; put five ounces of it into a large Glass Cucurbit, and pour upon it 15 ounces of one of these two *Aqua Fortis's*: and when the dissolution is perfected, precipitate the dissolution with Spirit of Wine rectify'd upon Salt of Tartar. Then having pour'd upon it a good quantity of fair water, let the precipitate settle, and after that pour out the Liquor by Inclination, that swims at the top; wash it with several waters strain'd through a fine cloath, till it be perfectly dulcify'd, and having dry'd it in the shade between two papers, you shall have a very white Magistery, fit for all deformities of the Skin, and to beautify the Complexions of Ladies, mixing it in proper waters or Pomatums; and therefore some have call'd it the White of Pearl.

The water of the first Lotion is very good to wash and cure Itches and Tetters.

Bismuth may be precipitated by weakning the Dissolvent with a sufficient quantity of fair water, without making use of Spirit of Wine; but then a good part of the Bismuth remaining among the water, the Magistery will be the less.

You may also from Bismuth extract Flowers, a liquour and Crystalline Salt, in this manner. Grind very finely upon Porphyry ten or twelve pound of Bismuth, and having put it into a large Glass Cucurbit, and pour'd upon it the weight of it in good greenish White-wine, cover the Cucurbit with a Blind-head; and having plac'd it in a Sand-bath moderately hot, leave it there for three or four days, stirring the substances from time to time. After which having pour'd out the same wine, and put as much more upon the Bismuth, renew digestion; and continue doing this five or six times one after another. Then having pour'd upon the Bismuth one part of the Wine drawn forth, cover the Cucurbit with its head, and having a Recipient fitted to it, and luted the closures fitted, distil this wine in a Sand-bath with a moderate fire, setting the first Spirit apart, if you think fit. When the Vessels are cold and unluted, pour upon the Bismuth as much wine as at first; and pour on and abstract, till all be drawn off, and that the Bismuth remain dry in the Cucurbit. At which time having stopp'd the neck of the Alembick, increase the fire to raise the flowers of the Bismuth, which you will find white and shining in the head, and must be kept in a double glass bottle close stopp'd, or else dissolv'd in the Cellar into water. Evaporate over a gentle fire all the Liquor distill'd, and having reduc'd it to a very little quantity, set it in the Cellar to Crystallize; putting some Straws among it for the Crystals to fasten to; then pour out the Liquor by Inclination and keep them for use.

The Flowers and Liquor are very proper to take away blemishes out of the face, and to correct the deformities of the Skin. They are also esteem'd as much as the Crystals to cure Fistula's, and Malignant and Cancrous Ulcers.

I omit several other preparations of Bismuth as being of no use in Pharmacy.

Besides the natural Bismuth, some notable Artists in Chymistry, having observ'd the parts that compose it, have found a way to make an artificial Bismuth so fair, and well

well imitated that it is almost impossible to distinguish it from the true.

Take a pound of pure Tin Plates, and cut them into little pieces; then having compos'd a Cement of a pound and a half of Arsenick, a quarter of a pound of white Tartar, and half a quarter of Salt Peter, beaten the whole, and mix'd it together, lay a layer of Cement and a layer of Tin in a good Crucible, and set it over a naked fire in a proper Furnace, using a moderate fire for an hour, but then increasing it by degrees to the utmost degree of violence for four hours. After fusion, pour the substance into a Mould heated and greas'd within, and make a Lin-got which you will find augmented in weight four ounces above the weight of the Tin.

Zink is also made of the same substances, and in the same proportion, and in the same manner as Bismuth; only instead of Tin, they use Lead with a little Calamin.

Note, that the more you melt either the one or the other with a little Arsenick, the fairer and clearer they will be.

The



The Fourth Part
OF THE
Royal Pharmacopoea:
CONTAINING
Several Particular Receipts taken out of
SEVERAL
FAMOUS AUTHORS;

With others

Freely communicated by several Learned
And Curious Persons.

HAVING acquitted my self, as far as in me lies, of the design which I propos'd to my self, in treating methodically of every thing that concerns both the one and the other Pharmacy; and having communicated with as much sincerity and exactness, whatever I thought necessary for the instruction of those that apply themselves to the profession; I do not believe I could better conclude this work, than by imparting to publick view several choice Receipts, the effects whereof I have often experimented with good success, some of which are rarely, or not at all to be found in Printed Authors. But as I do not think that the efficacy of Remedies is to be grounded upon the excessive number of the ingredients which compose them, as some imagine; it is not my intention here to display, in imitation of them, long Receipts, more pompous for the number and variety of their ingredients, than to be commended for the advantage and success which is to be expected from them. But on the contrary, it is my absolute resolution to produce none but such as have been frequently experimented, the composition whereof consisting of few ingredients well chosen, well prepar'd, and well proportion'd, will produce without all doubt, those good effects which can be rationally expected from them.

An Apopletick Water.

Take tops of Marjoram, Tilet-Flowers, of Lilly of the Vally, of Rosemary, Lavender, Sage, Primroses, of each three handfuls. Let them macerate eight days in the Sun, or in a Stove, in Spirit of Wine rectifi'd, and Orange-flower water, of each three pints. Then distil them according to art in a Sand-Bath, and keep the water.

This

This water is excellent to fortify the brain and the noble parts. It is given from half a spoonful to a whole one, as well to prevent, as to cure the Apoplexy; and in all diseases of the brain.

A Bezoardick Water.

Take the roots of Carline Thistle, and Swallow-wort, of each four ounces. Leaves of Water-germander, Rue, Blessed Thistle, Thyme, and tops of St. Johns-wort, of each two handfuls. Being all bruised and cut, let them macerate in four pints of distill'd water of Nuts, and one pint of spirit of Wine; and then distil them in a Sand-Bath with a moderate fire; burn the sediment, and extract a Salt out of it to be dissolv'd in the water, which is to be kept for use.

This water is of great efficacy against the Pestilence, and in all Epidemick diseases. For preservation, a spoonful is enough at a time. But three or four ounces may be given to provoke sweats, or when more powerful effects are requir'd.

A Water to break the Stone of Quercetan.

Take juices of Leeks, Turneps, Raddish, of each two pound. Of Limons, Pellitory of the wall, Monse-ear, of each half a pound. Make a digestion and fermentation first of all these juices mixt together, and then a distillation. Crystal calcin'd may be added, and also Pidgeons-dung, which is altogether nitrous, of each as much as suffices.

Quercetan praises this Water, to break the Stone, as well in the kidneys as in the bladder; and that it operates without danger and pain. It is given from one ounce to two. It may be also us'd in injections.

A Water for the same, of the same Author.

Take juices of the lesser Spurge, Turnsole, Knotgrass, of each one ounce. In these macerate of Borax one ounce; then distil the water, and keep it for use.

The same Author highly esteems this water for the same purposes; prescribing it after the same manner.

A Cosmetick Water of Pidgeons.

Take young Pidgeons gutted, and cut into pieces number two. Crums of white-bread half a pound. Peach-kernels, and the four greater Coll-seeds cleans'd, of each four ounces. Whites of twelve eggs, and juice of four Limons. Macerate them twelve hours in four pints of Goats-milk, then distil them in a Marias-Bath. To the distill'd water add Borax, Camphire, Sugar-Candy, and Burnt-alom, of each three drams. Expose them first three days to the Sun, then let them stand fifteen days in a Wine-Seller; filter the water, and keep it for use.

This water smoothes, whitens, beautifies and preserves the complexions of Ladies. They may wash their faces with it at any time, but especially morning and evening.

Another Pidgeon-Water.

Take Selsitt Myrrh powder'd six ounces. Two young Pidgeons gutted and cut to pieces; Spanish-wine and Whey, of each two pints. Juice of Limons, bigger Hoxsleek, and fragrant Pippins, of each one pound. Water of Roses, and Water-lillies, of each half a pint. Two whites of Eggs. Mix them altogether in a glass Alembick, distil them in Balneo Mariæ, and preserve the water.

This water serves for the same uses as the former, and is little inferior to it.

Another

Another Cosmetack Water.

Take pure fine Sugar one pound, Roch-Allum three ounces. White Poppey-seed, Flowers of Beans, Water Lillies, Violets, and greater Housleek of each one handful, the juice of four Limons, the Crum of two white Leaves, Goats milk and White-wine of each two pints; bruise what is to be bruise'd, mix and put all together into a glass Alembick, distill them in Balneo Mariæ, and keep the water for use.

This water is good to smoothe, whiten, and preserve the complexions of Ladies.

A Diuretick Water of Monsieur D' Aquin.

Take Roots of Rest Harrow, Parsley, Fennel, Eringo's, Juniper Berries, and Alkeengi, of each two ounces; Leaves of Golden Rod, Water-Cresses, Water-Pimpernel and Elder Flowers, of each two handfuls, bruise or cut them, and macerate them all twenty-four hours in White-wine, Juice of Raddish, and Parietary, of each two pints. Then add Narbon-Honey one pound, Venice Turpentine half a pound; distill them according to Art in a moderate Sand-bath, adding to every pint of distill'd Water dulcis'd Spirit of Salt one dram.

This water is wonderfully prevalent against all difficulties of making water. It is given from one to three or four ounces.

Another Diuretick Water.

Take Roots of Stone Parsley, Raddishes, the bigger Valerian, and Peach Kernels, of each four ounces, Seeds of Burdock and Groundsel, of each two ounces, Flowers of Pimpernel, Water-Cresses, Water-Pimpernel, Crisp-Mint, and Venus-hair of Montpellier, of each two handfuls. Being all bruise'd, macerate them three days in six pints of strong White-wine, then adding Venice Turpentine two pound, distill them in a Sand-bath, and keep the water for use.

This water works the same effects as the former, and the dose is the same.

A corrected Anti-Epileptick Water of Langius.

Take shavings of Mans Skull, Mistletoe of the Oak, Roots of Piony, and white Dittany, of each two ounces; fresh Flowers of Lilly Convally two handfuls; of Lavender, Rosemary, and Tilet, of each three handfuls, Cinnamon six drams, Nutmeg half an ounce, Cloves, Mace, and Cubebs, of each two drams; being all bruise'd, put them into a Matras close stopp'd, in eight pints of Malmsey; let them macerate for a week over a very gentle fire; then distill them in a moderate Sand-bath, and keep the water for use.

This Anti-Eleptick water of Langius has been long in request; but it will be much better'd by adding the shavings of human Skull, and preparing it as here prescribed. It is given in Epileptick passions from two drams to an ounce. It may be us'd also as well for the prevention, as in the cure of this distemper. It is also very proper in all cold diseases of the Brain.

A Water to take away Freckles and Morpew in the Face.

Take Strawberries a pound and a half, Flowers of Lillies and Beans of each half a pound; Roch Allum, Stone Allum of each half an ounce; Sal Gemme, Niter, Kermis-grise, of each two drams; macerate them for ten days in Malmsey-Wine, Narbon-Honey, and White wine Vinegar, of each one pint. Then distill them in a moderate Sand-bath, and keep Water.

This Water is very proper to take away Freckles or Morpew from the Face; dipping a Linnen rag in it, and laying it upon the part, going to bed; in the morning wash with Water of Water-Lillies.

A Water against quartan Agues.

Take Roots and Leaves of Fennel, Leaves of Wormwood, Sage, Rhue, Mugwort, and Rosemary, or Flowers of the same, and tops of Lesser Centaury; of each two handfuls; macerate them three days in four pints of White-wine, then distill them according to Art.

This Water is highly commended against the Fits of Agues, especially the Quartan, given at the beginning of the fit from one to four ounces.

A Water against a stinking, virulent, and inveterate Gonorrhœa of Quercetan.

Take Root of Florence Orrice, Leaves of Cretan Dittany, and dry Mint, of each one ounce; Seed of Agnus Castus, Rhue, Lettuce, of each six drams; Venetian Turpentine four ounces, White-Wine twenty ounces; bruise what is to be bruised, put all together into an Alembick, distill them in Balneo Mariæ, according to art, and keep the Water for use.

This water is excellent to heal the most inveterate and malignant Gonorrhœas, provided necessary purgations, and other general Remedies have preceded. It is to be given two spoonfuls every morning fasting, for several days together.

Schroderus's water against the Distempers of the Throat.

Take Leaves of wild Pear-tree, Parsley, Sanicle, Woodbine, Water-Germander, Cinkfoil, round Birthwort, of each two handfuls. Thorough wax four handfuls, four Ale twelve pints; bruise the herbs, put them all into a Vessel close stopp'd, and let them ferment for three weeks. Then add three ounces of Album Gracum, and distill them all through a Bladder.

Give two or three Spoonfuls of this water to drink, against Inflammations of the throat or Palate. It may be often garg'd, or the Patient may dip a Linnen Rag in the water and wrap about his throat.

A corrected Anti-Epileptick Swallow-water.

Take twelve Swallows, yet in their Nests, cast them whole into a glass Alembick, adding thereto shavings of Human Skull three ounces, Castor one ounce and a half, powder of Mistletoe one ounce, Juice of the Roots and Leaves of Male Piony six ounces. Waters of the Flowers of Tiler, Lavender, and Lilly Convally, of each a pint and a half, Vinegar of Squills half a pint; macerate them all together over a very soft fire for forty hours, then distill them in a moderate Sand-bath, and keep the Water for use.

This water has particular vertues against the Epilepsy. It is given about a spoonful in the fit; and may be continu'd every day, as occasion requires, after the use of general Remedies.

A Hysterick Water.

Take Juice of Nettle, Wormwood, Mugwort, Penny Royal, Hyssop and Elder Flowers of each equal parts; distill them together according to Art, and preserve the Water for use.

This Water is an excellent Remedy against all distempers of the Matrix. It is to be taken by Spoonfuls, to five or six ounces at a Time, as occasion requires.

Another Hysterick Water.

Take Roots of Piony, Briony, Orange-Peels, of each three ounces. Flowers of Mugwort, Fetherfew, Baume, Pennyroyal, Rhue, Savine, and Elder Flowers, of each one handful. Myrrh and Castor of each half an ounce, Saffron two drams. Let them macerate four and twenty hours, in Spanish Wine, Water of the Catkins of Filberds, and Orange-Flower water, of each two pints, and distill them in a Sand-bath.

This water is highly recommended against all Distempers of the Matrix. But the dose of it, is to be less then that of the former, from half an ounce to two ounces.

An Imperial Water.

Take Cinnamon four ounces, Nutmegs and Citron Peels, of each two ounces. Cloves, Calamus, Aromaticus, Yellow Sanders, and Roots of Piony, of each one ounce. Leaves of Laurel, tops of Hyssop, Marjoram, Thyme, Savoury, Flowers of Sage, Rosemary, and Lavender, of each one handful; bruise what are to be bruised, and macerate all together for twenty-four hours in White-wine and Baum-water, of each four pints, and Orange-flower Water half a pint; then distill them according to Art.

This Imperial water is highly commended in distempers of the head, the stomach and the Matrix. It is also very proper to facilitate the Birth; it is given from two drams to an ounce.

Aqua Mirabilis.

Take Cinnamon the choicest one ounce, Citron Rhind, and Nutmegs, of each six drams, Cloves, Galanga, Cubebs, Mace, Cardamoms, Ginger, of each two drams; bruise all together, and macerate them twenty-four hours in Juice of Baum, White-Wine, and Spirit of Wine, of each one pint; then distill them according to Art in a moderate Sand-bath.

This is an excellent water to fortify all the noble parts, and to excite vigour in the Venereal act.

An Anti-Nephretick Water of D. de Bellegarde.

Take Narbon-Honey half a pound, Venice-Turpentine two ounces, Nephrenick-wood and Root of Rest-Harrow, of each an ounce and a half, Lignum Aloes one ounce, Galanga, Cloves, Cinnamon, Mace, Cubebs, and Mastich, of each half an ounce; bruise what are to be bruised, and macerate all together for three days in four pints of Aqua vita; then distill them with a moderate fire.

This water is highly recommended against Gravel, and all sorts of Cholicks, given from one dram to half an ounce either alone, or mix'd in proper liquors.

A Famous Odoriferous Water.

Take Root of Florence, Orrice and Benjamin, of each an ounce and a half, select Storax six drams, Lignum Rhodium half an ounce, Aromatick Reed and Labdanum of each two scruples; Flowers of Benjamin one scruple; being all pulveriz'd and put into a Matras, macerate them twenty-four hours in a lukewarm Mary's Bath, in a pint of Rosewater, and half a pint of Orange-Flower water, the Matras being well stopp'd; then distill them in the same Bath a little hotter, and keep the water for use, mixing it with Musk and Ambergrise, of each six drams.

This water is call'd the Angels-Water, because of its sweet and pleasing odour; You may, after you have infus'd the drugs in the Waters, strain the Infusion, and having dissolv'd the Musk and Ambergrise prescrib'd, preserve the Liquor

under the name of Angels water. You may also make use of the sediment, to mix it among Cloaths and Linnen being dried. The use of is only this water external.

An incomparable Water for the Eyes.

Take Flowers of Corn flower or Blew bottle gather'd with their Cups, and bruis'd, as many as you please, macerate them in a sufficient quantity of Snow or Snow-water for 24 hours; then distil them in a moderate Sand-bath and keep the water for use.

This water is wonderfully effectual not only to cure most of the Infirmities of the eyes, especially such as are troubl'd with Inflammations, but to clear, strengthen and preserve the sight, especially of old people; for that reason it is call'd break-Spectacle water, because they that use it, need take no care for Spectacles. Some drops of it are to be put into the eye morning and evening, or at any other time.

A Paralytick and Apoplectick Water.

Take black Cherries bruis'd four pound, crums of White bread one pound, Root of Valerian bruis'd, and shavings of Harts-horn, of each three ounces, Mace and Cloves ponder'd, of each half an ounce, Saffron two drams. Flowers of Lavendder and Lilly Convally, of each three handfuls. Mix all together, and macerate them 24 hours in a warm Marias Bath, then increase the heat and distil them in the same Bath; and preserve the water for use.

This VWater is highly commended against the Apoplexy, the Palsy, and all cold distempers of the brain, being taken from half an ounce, to an ounce.

A Water to assuage the pains of the Gout.

Take Dry Ox dung, and Sperm of Frogs, of each equal parts; mix them together, put them into a Glass Alembick, and distil them in Balneo Maria with a moderate heat, and keep the Water for your use.

This water is commended to appease the pains of hot Gouts, Linnen-Cloaths being dips therein and apply'd to the part affected.

A Water against the Scurvy.

Take Roots of Horse Raddish, and Garden Raddish bruis'd, of each one pound, Juices of Scurvy-grass, Water Cresses, Water Pimpernel, Money-wort, Mint, Baum, Fumitory, of each half a pint; macerate them 24 hours, then distil them in a Sand-Bath with a moderate heat.

This VWater is us'd with happy success in Scorbutick diseases, giving it in the morning from one, to two or three ounces, and continuing the use thereof, as long as necessity requires.

A Treacle Water.

Take Roots of Gentian, Angelica, Masterwort, Valerian, and Contrayerva, of each two ounces, Citron Rinds, and Orange Peele, Cinnamon, Cloves, and Juniper Berries of each one ounce. Tops of Water Germander, Rhoe, and St. Johns-wort, of each one handful. Infuse them three days in Spirit of Wine, and water of Nuts, and Blessed Thistle, of each two pints, then adding four ounces of approv'd Treacle, distil the whole in a Sand-bath, and keep the Water.

This is an Excellent water to resist poison, and to fortify all the Noble parts, being taken from one dram, to half an ounce.

Some make a Treacle water by dissolving the Treacle in equal parts of Spirit of VVine and Viacery, and use it so without any distillation.

A Royal Aqua-Vitæ.

Take *Lignum Aloes*, *Roots of Zedoary, Angelica, Carlino Thistle, and Valerian*, of each one ounce. *Choice Cinnamon, Mace and Citron Rind*, of each six drams; *Cloves, lesser Cardamoms and sweet Fennel seed*, of each half an ounce. *Flowers of Oranges, Rosemary, Sage, and Marjoram in Flower*, of each two small handfuls; bruise what is to be bruised, and put them into a *Matrass* with *Spirit of Wine and Malmsey*, wine of each four pints. Stop the Vessel close, and let them macerate over a gentle fire for three days; then distil them in a *Sand-bath*, according to art, dissolving in the distilled water *Musk and Ambergrise*, of each a dram and a half; then put up the water.

This water though consisting of few Ingredients, deserves to be preferred before a great number of compounded Aqua Vitæ's. of famous Authors, where is nothing to be expected, but a confusion of different qualities and different substances. But the perfection of this is, that though there be not many Medicaments, yet they are of great virtue, and tend all to the same end, which is to fortify the brain, head and stomach, and all the Noble parts, when enfeebled by the dissipation of the Spirits, or overpressed by the abundance or ill qualities of bad humours. It is to be taken fasting from one dram, to half an ounce, mixed in proper Liqueur.

The Green Water of Hartman corrected.

Take *Honey of Roses* two ounces, *quick Sulphur, Raw Alum, and Verdigrise* of each one ounce. *Album Gracum, Tops of Savine and Elder*, of each one dram. *Leaves of St. Johns-wort, Rosemary, Rhue, Plantaine, Sage, Penny-Royal*, of each half a handful. Boil all these, except the Verdigrise, for a quarter of an hour, in *White-wine*, and *Nightshade water*, of each one pint; then dissolve the Verdigrise, and add it to the rest being taken off the fire: strain the green water and keep it for use.

This green Water is of excellent use for the cure of all sorts of Ulcers of the Mouth, throat and Nostrils, and in all other parts of the body, as well *Scorbutick*, as *Veneral*. Wash the Ulcers with Cotton or Lint dipped in the water.

A Bezoardick Balsome.

Take *Distilled Oils of Rhue, Citron Rind, and Orange Peels, Lavender and Angelica*, of each half a Scruple; *Oil of Amber rectified*, five drops; *Campfire*, four grains; *Oil of Nutmegs* half an ounce. Make a Balsome according to art.

This Balsome is good against *Pestilential air*, especially in *Plague time*. It is very proper to suppress the vapours of the Matrix. Put never so little up into your Nostrils going out of doors, or in the house against the Vapours of the Matrix. This Balsome is also very effectual in diseases of the brain, and may be called *Apolectic*.

A Hysterick Balsome.

Take *Tears of Assa Fætida, Galbanum, Opoponax, Sagapen, and Ammoniac*, of each one dram. *Distilled Oils of Rhue, Amber and Juniper Berries*, of each one scruple; melt the Gums in a *Brass Mortar*, mix them with the Oils, and make a Balsome according to art.

This Balsome is very proper to suppress the vapours of the Matrix put up into the Nostrils, and to provoke the *Menstruums*, anointing the Navel, and lower part of the belly therewith.

An admirable Vulnery Balsome.

Take *oil of Venice Turpentine*, two ounces, *distilled Oil of St. Johns-wort*, and wax of each half an ounce. *Verdigrise and green Vitriol*, of each six grains. Mix them together.

together, and put them into a glass Viol close stopp'd, expose it to the Summer Sun for some days, and keep the Balsom for use.

This Balsom is of wonderful vertue for the cure of all sorts of curable wounds. Pour some few drops into the wound, then apply to it a little pillow dipp'd in the Balsom heated lukewarm.

Another Vulnery Balsom.

Take Oil of St. Johnswort half a pint, Oil of Laurel and Venice Turpentine, of each two ounces. Oil of Juniper Berries distill'd half an ounce, Powder of choice Aloes two drams, Verdigrise and Oil of Cloves of each one dram; mix them together, expose them to the Sun for some days, and keep the Balsom.

This Balsom is highly esteem'd for the cure of all sorts of wounds.

A Stomach Claret-water.

Take bruis'd Cinnamon four ounces, Cloves, Ginger, Cardamoms, Galanga pūveriz'd of each half a dram; macerate them in the cold in four pints of Aqua Vitæ, and a pint and a half of Rosewater, for six hours in a Matras close stopp'd; then filter the whole, and in the filter'd liquor dissolve two pound of pure Loaf Sugar; and the Claret-water is made.

This Claret-water is pleasing to the taste, and fortifies the stomach and the noble parts, dissipates wind, and creates an appetite; the dose is from one dram to half an ounce.

An Antimonial Claret-water.

Take Glass of Antimony finely powder'd two drams, Spanish Wine a pint and a half; macerate them for a week over a very soft fire, in a Matras carefully stopp'd, soaking it from time to time; mix then with the whole four ounces of pure Loaf Sugar, and two drops of Oil of Cinnamon, and keep the Claret for use.

This liquor must be preserv'd in a double glass Bottle well stopp'd. It is very pleasing to the taste, and purges gently upward and downward, being tak'n from two drams to half an ounce.

A Collyrium or Water for the Eyes of Monsieur D'Aquin.

Take Tutia of Alexandria thrice quench'd in Rosewater, and ground upon Porphyry, and Cloves powder'd, of each one ounce and a half; Sugar Candy one ounce, Camphire, Aloes of each one dram and a half, Spanish Wine four pints, White Rose-water half a pint, Celandine, Fennel, Eyebright, and Rhue-waters, of each two ounces; mix all together, put them in an Earthen Jug exactly stopp'd, and expose them to the Sun for fifteen days. Then keep the water for use.

This water is very effectual against all infirmities of the eyes; using only the clear water, and leaving the sediment at the bottom.

A Collyrium of Monsieur Fouquet.

Take Tutia prepar'd two ounces, Mace finely powder'd one ounce, white Vitriol one dram, Camphire and Rose-water of each a pint and a half, Plantain water half a pint; mix them together in a strong Bottle close stopp'd, and expose them to the Sun for some days; then keep the Collyrium for use.

This Collyrium is an excellent remedy for all infirmities of the eyes.

A Blew

A blew Collyrium.

Take of the Water where Quick lime has been quenched, filter'd, one pint: Salt Ammoniack powder'd one dram. Put them all mix'd together into a Brass Bason; there let them stand all night, Filter the Liquor and keep it for use.

This Collyrium is one of the best remedies that can be prepar'd for all Infirmities of the eyes. The colour proceeds from some particles of the Copper, which the Salt Ammoniack, and the quick Lime have corroded off, and dissolv'd.

A Soluble Cream of Tartar.

Take Cream of Tartar what you please, dissolve it in a sufficient quantity of hot water; then drop into it gently Liquor of Salt of Tartar till the Ebullition cease. Evaporate the superfluous moisture, and the Soluble Cream of Tartar will remain.

The quantity of the fix'd Salt surmounting the acid of the Cream of Tartar, breaks the Union of its parts, and insinuating it self into its pores, makes it dissolvable in Water cold Liquors, whereas otherwise it could not be dissolv'd, but in those which are boiling hot.

Soluble emetick Cream of Tartar.

Take Crocus Metallorum mix'd with its Salts, and Cream of Tartar of each two ounces; pulverise them very finely, and macerate them for twelve hours in three pints of cold Fountain-water. The next day digest them as long in a moderate Sand-bath, and at length increasing the fire, let them boil gently. Filter the Liquor, and evaporate it till a thin Film cover it: then set it in a cold place to CrySTALLIZE.

The parts of this Cream of Tartar being disunited by the mixture of the fix'd Salt remaining in the Saffron of Metals; and the Cream being impregnated with the qualities of the same Saffron, is easily dissolvable in the cold water, and fitted to purge upward and downward, giving it from two or three, to five or six grains, in broth, or in Wine, or some other Liquor.

A Choler-purging Electuary of Francis de le Boe Silvius.

Take Pulp of Sower-sweet Prunes, thick'nd to a due consistence, ten ounces. Cremor Tartar and select Scammony an. two ounces. Choice Rhubarb ten drams, Biting Cinnamon half an ounce, Yellow Sanders two drams, pure Sugar clarify'd and boil'd sixteen ounces; Mix them together and make an Electuary according to art.

This Electuary purges very advantageously all bad humours, especially Cholerick and Serous. The dose is from two drams, to half an ounce, in Bolus, or dissolv'd in proper Liquors.

A Water-purging Electuary of the same.

Take Extract of Juniper Berries and Pulp of Tamarinds thick'nd to a due consistence of each four ounces. Root of Jalap finely powder'd an ounce and a half. Choice Scammony one ounce, Biting Cinnamon, and sweet Fennel seed pulveriz'd, an. two drams; clarify'd and boil'd Sugar ten ounces. Make an Electuary according to art.

This Electuary is very proper to carry off Serosities, especially Hydropical, being taken from two drams, to half an ounce, and sometimes six drams.

A Cephalick Elixir.

Take Mistletoe of the Oak, Roots of Piony and the bigger Valerian, of each an ounce and a half. Piony seed, Laurel and Juniper berries, of each one ounce. Cinnamon, Mace, Cubeb

Cubebs, of each 3 drams. Flowers of Tilet Rosemary and Lavender of each one hand-ful. Bruise what are to be bruised, and macerate altogether for 24 hours in Lilly Con-vally water, black Cherry water, and Spirit of Wine rectify'd of each one pint and a half. Then distil them according to art. To the Liquor distill'd add refin'd Sugar one pound, Tincture of Ambergise one dram; and put up the Elixir in an Earthen pot well stopp'd.

This Elixir is wonderfully useful in Epilepsies, Apoplexies, and other cold diseases of the brain, being taken fasting from half a spoonful to two whole ones.

A Hysterick Elixir.

Take the distill'd Oils of Wormwood, Penny-Royal, Featherfew, Rhus and Amber of each six drops. Tinctures of Saffron, and Castor of each three ounces; refin'd Sugar, Mugwort and Elder flower waters, of each six ounces. Make an Elixir according to Art.

This Elixir is proper against all Infirmities of the Matrix, taking the same dose as of the former.

An Antiscorbutick Elixir Proprietatis.

Take Myrrh of Alexandria, Aloes Succorrine, and choice Saffron pulveriz'd, of each four ounces. Digest them in a vessel close stopp'd for eight days, in a moderate Sand-bath with four pints of Antiscorbutick Spirit, then increasing the heat of the Bath for one hour, filter the Tinctur'd Spirit, and keep it apart. Then pour upon the remaining Mass one pint of new Spirit, and reiterate digestion and Filtration; and then draw off the spirit in a Sand-bath with a moderate fire, till a third part only remain; and when the Vessels are cool preserve the Elixir. When it is to be us'd mix with it a third or fourth part of the volatile Spirit of Harts-horn.

This Elixir is highly esteem'd in all diseases that proceed from Corruption of humours. But it is chiefly made use of for the Cure of the Scurvy. For it purifies the blood, and quickens the sloth of the Circulation. It is given in VVine or some other proper Liquor, from seven or eight to fifteen or twenty drops. You will find the Anti-Scorbutick Spirit in its proper place.

A Stomach Elixir.

Take the distill'd Oils of Cinnamon, Cloves, Wormwood, Citron and Orange peels of each six drops; Refin'd Sugar pulveriz'd, Spirit of Wine Rectify'd, and mint and Orange Flower waters, of each six ounces, mix them according to art, and make an Elixir.

The use of this Elixir is very profitable in all cold Infirmities of the stomach, as also to fortify all the Noble parts. The dose is from two drams to half an ounce in proper Liquors.

A Plaister of the Abbot of Grace.

Take Oil of Roses, by many infusions very odoriferous, 16 ounces. Licharge of Gold prepar'd, and juice of pale Roses purify'd, of each eight ounces, boil them according to art to the consistence of an emplaster; then add four ounces of yellow wax, and the Plaister is made.

This plaister is very famous for the cure of all sorts of VVounds and Ulcers. The operation is gentle and the scent pleasing, so that it is very fit to make Saradraps for the cure of Cauterics.

A Plaister to Strengthen the Womb.

Take Minion ponder'd, one pound: Ceruse prepar'd, half a pound. Soap ten ounces, common Oil two pints, Orange flower water, nine ounces. Boil them according to art to an Emplaster.

This Plaister is highly commended to strengthen the Ligaments of the Matrix, being spread upon a round piece of Leather, and apply'd to the Matrix.

A Plaister for the Kings-Evil.

Take Emplaster of Hemlock eight ounces. Gummi Elemmi very pure, two ounces, Red precipitate Mercury, two ounces and a half, mix them together into an Emplaster.

This Plaister is very proper to dissolve, cleanse and heal the Soars of the Kings-evil.

A Powder against the Ague.

Take Cinnabar of Antimony, one ounce. Common Salt roasted two drams. Powder them together, put them into a Glass Cucurbit, and pour upon them four ounces of Oil of Sulphur. Let them digest for two days over a moderate heat in a Bath of asbes, then increasing the heat, evaporate the superfluous moisture. Then wash the Mass that remains, dry it and reduce it into Powder, and mix it with four ounces of Flowers of Sulphur, and set it over the burning Coals in an Earthen Platter. Stir it continually with an Iron rod, and when the flowers are consum'd, pour in Spirit of Wine three fingers high, and when it is consum'd, take the remaining Mass, powder it and preserve it for use.

This Powder is highly commended for the cure of all Intermitting Agues being taken half an hour before the fit, from fifteen to twenty grains, in some Syrop or Cordial water, and supping a little broth two hours after. Purgation and bleeding must precede the use of it, and you may take the same dose three times, if the first and second do not prevail. It works chiefly by sweat.

Another Ague Curer, attributed to Riverius by Rolfincius.

Take pure Gold dissolv'd in Royal water, and Glass of Antimony dissolv'd in Aqua-Fortis, of each half an ounce. Quick-silver dissolv'd in Aqua-Fortis, three ounces. Mix the dissolutions, and distil them through an Alembick twelve times in a moderate Sand-bath, reiterating Cobebation. Upon the powder left at the bottom, pour Spirit of Wine rectify'd, and draw it off six times from the powder. Then Calcing the powder with a wheel fire in a Crucible, almost to Ignition. Gve six grains of this Powder with twelve grains of Scammony.

The Author of this Febrifuge having only given us general notions of it, we cannot be well assur'd that we have the true preparation; for though the powder that Rolfincius has describ'd, may be good in it self, yet it does not seem to me to correspond with all the Author has said to make it a true Febrifuge. Some believe the three main ingredients, or Hercules's, that Riverius depends upon, are the Mercury, Salt, and Viteriol, and that the twelve consequent sublimations of the Mercury, are their twelve Travels, which may be reasonable, provided you add to the first sublimation as much raw Quicksilver as is requisite to dulcifie the sublimate. But what he means by the third man of might, I cannot understand; for though Rolfincius, and after him others, have made choice of Scammony, others Gummi Gutta, others of Coloquintida, others of black Ellebore; Yet if you consider the dose of the Febrifuge, which was usually twenty grains for grown people, and the effects of purging upward and downward, and the proportion of the fourth Champion, it is no-where to be found but in the Antimony. For neither the Scammony nor the Gutta Gummi, in six grains only can produce such great effects, nor are the Coloquintid and black Ellebore, as rugged as

they are, very probable to do it; for which reason I think the composition ought to be thus:

A more Probable Febrifuge of Riverius.

Take *Mercurius dulcis* twelve times sublimated, an ounce and a half, vulgar Emetick powder for strong, or corrected, as I have lately said; for tender constitutions, half an ounce, mix them together and make a powder.

This Powder finding the humours dispos'd, works upwards and downwards. If you use the ordinary Emetick, but it will only work downward if you take the Corrected Powder. And in regard the Febrifuge contains a reasonable dose of Emetick Powder; the *Mercurius Dulcis* thus prepar'd, making the bad humours slippery, and serving as a Corrective to the Emetick Powder, we may rationally hope for good Effects. *Riverius* gave his Ague powder to all Ages and Sexes, fasting the day before the fit. You may give six grains to little Children in a roasted Apple, and augment the Dose according to the age to twenty grains, and for very strong Constitutions to four and twenty.

A Cosmetick Ox Gall.

Take four pints of the Gall of an Ox digested four and twenty hours in a *Maries Bath*, Roch Alum, and Salt of Glass powder'd, of each one ounce. Mix them together, and put them into a Matraass carefully stopp'd; and in May expose them to the Sun, shaking them three or four times a day; then Filter them. In the Filter'd Liqueur mix two ounces of Porcellane powder'd fine, and dissolv'd in Spirit of Vinegar, Borax, and *Sperma Ceti*, of each one ounce, Sugar-Candy, three ounces, Camphire and sweet Sublimate, an. three drams. Which done, expose them to the Sun again for ten days, shaking the Ingredients often, then filter the Liqueur and keep it for use.

This Preparation is highly esteem'd for clearing the face from Morpew, to defend it from Sun burning, and to take away the effects of Sun burning. The face must be wash'd with it evening and morning; in the morning washing afterwards with water of Lillies; or VWater Lillies. Or you may travel in the Sun all day long with the face anointed with it, and wash at night, to prevent Sun burning.

Virgins Milk.

Take the Dissolution of Litharge of Gold in distill'd Vinegar, eight ounces; the dissolution of Roch Alum in Water of Water Lillies, eight ounces. Filter the dissolutions apart; then a while after mix them, and the Virgins Milk is prepar'd.

The use of it is to beautify the hands and face. They who have by them Tincture of Storax, and Benjamin prepar'd with Spirit of VVine, may make a Virgins Milk at any time, by mixing a little of the Tincture with seven or eight times as much of some distill'd Cosmetick water. Which is the Virgins Milk generally us'd now adays, by reason of its odour and good effects.

Contrayerva Stone.

Take Roots of *Contrayerva*, or Spanish Counter-poison, Oriental pearls, red Coral, and white Amber prepar'd, of each one dram. Erabs eyes prepar'd; as much in weight as all the rest; make them up into Balls with gelly of Vipers, to be dry'd and kept.

This Stone is highly commended against Poison and all Epidemick distempers. It must be finely powder'd and given in Broth, or some Cordial water, from ten, to twenty or thirty grains, and sometimes to a dram.

The Medicamental Stone.

Take Hungarian Vitriol one pound, Salt of Niter half a pound; Cernuse, Alum, Bole Armenian, Salt of Glass, of each four ounces, Salt Ammoniac two ounces; beat them all carefully, moisten'd with common Vinegar, and bake them in an Earthen pot over a gentle fire to the hardness of a Stone. Break the pot, and preserve the Stone for use.

It is very proper to cleanse and cicatrize Wounds and Ulcers, to cure the Infirmities of the eyes; the Itch, Erysipela's, and all deformities of the Skin, and also burns. It is a Specifick to stop Gonorrhea's, by injection, when the Malignity of the Venome is overcome. Dissolve an ounce in two pints of Rain-water; then filter the Liquor, and use it either for Lotion, Injection, or to dip Linnen Rags in, and apply to the parts affected.

A Liniment for the Emrods.

Take Flowers of Sulphur two drams; oil of Eggs half an ounce, Oil of Roses one ounce. mingle them for a Liniment to be apply'd to the Emrods. Or

Take Salt of Saturn, half an ounce, Oils of Camomile and Roses, and juice of Wall Penny wort, of each two ounces. Make a Liniment according to art. Or

Take Oil of Line, the Pulp of an Onion bak'd under the ashes, of each two ounces, White-wax half an ounce. Make a Liniment according to art. Or

Take the Pulp of Hog-lice, Poplar Ointment, and Oil of eggs, of each one ounce. Extract of Opium half a dram. Mix them, and make a Liniment according to art.

All these Liniments are proper to assuage the pains of the Emrods.

A Liniment for Tettars.

Take red Mercurial precipitate, and green Vitriol, of each one ounce, burnt Alum half an ounce, Verdigrise and Borax, an. two drams. Juice of red Dock, two ounces. Hogs grease and new butter, of each four Ounces. Press'd Oil of Henbane one ounce, This Liniment is wonderful to cure all sorts of Tettars.

A Liniment for the Sciatica.

Take three Puppies newly whelp'd, and as many live Moles; Earth worms one pound, Leaves of Laurel, Rosemary, Lavender, Mother of Thyme, and St Johns wort an. one handful. Boil them in common Oil and Red-wine, of each three pints, to the consumption of the Wine. Then strain and press them strongly forth; to the Liquor press'd forth add of yellow wax and Goose-grease of each ten ounces.

This Liniment is highly commended to appease the pains of the Sciatica, and all sorts of Rhumatismes.

A Liniment to prevent the Scars of the Small Pox.

Take Licharge of Gold prepar'd, and Cernuse wash'd in Rose-water, of each one ounce; Oil of the four greater cold seeds cleans'd; and Bitter Almonds and Eggs of each half an ounce. Nightshade and Plantain Waters as much as suffices. Make the Liniment according to art, like a Nutritum.

This Liniment is highly recommended to prevent the marks of the Small-Pox.

A Liniment to stay Vomiting.

Take Oil of Nutmegs press'd, and the Queen of Hungaries water, of each half an ounce. Distill'd Oil of Wormwood, one dram Select Mastick finely pulveriz'd two drams make a Liniment according to art.

This Liniment apply'd hot to the Stomach stays vomiting;

A Sleep provoking Liniment.

Take Ointment of Roses, and Poplar, of each one ounce; Oil of Henbane-seed press'd, two drams; Liquid extract of Opium, one dram. Mingle the Ingredients, and make a Liniment for use.

This Liniment is apply'd with success to the Forehead and Temples, to appease the pains of the head, and procure rest.

A Hyacinthine Antimonial Liquor.

Take Hyacinthine glass of Antimony finely pulveriz'd, Salt of Wormwood, of each forty grains, speedwell-water, five ounces. Macerate them 24 hours in a warm Bath; Then filter the Liquor, and add to it a dram of Cinnamon water.

This Liquor gently purges upward and downward all ill humours that it meets with. It is given very appositely in all Agues, being taken from three to six drams.

A Histerick Liquor.

Take Castoreum two drams, Saffron and Camphire an. one dram. Macerate them for fifteen days in one pint of Aqua-Vita without any fire. Then filter the Liquor.

This Liquor is a Specifick to suppress all vapours which rise from the Matrix. It may be tak'n as occasion requires, at any time fasting, from half a spoonful, to one whole one. It may be also put up in the Nostrils, laid upon the temples, or carryed about the person in a box full of Cotton dipp'd in the Liquor.

A Caustick Liquor of Vertdigrise.

Take Vertdigrise four ounces. Salt of Niter eight ounces; being mix'd together, let them burn in an Iron or Marble Mortar well heated. Then pulverise them, and putting them into a convenient Vessel, let them dissolve in a moist place by dropping, and set a Vessel under to preserve the Liquor.

This Liquor is approv'd for the consuming rotten and proud flesh, and all sorts of Excrecencies, and particularly those which accompany Venereal Distempers.

A Muscilage against Chops of the Breasts.

Take white Gum Tragacanth finely powder'd, two drams. Macerate them over a very soft fire in a sufficient quantity of Rose-water, and extract the Muscilage for use.

Muscilages of Gum Tragacanth are a Specifick Remedy to cure chops and clefts of the breasts, hands and Lips, being apply'd thereto.

An Anti-epileptick Oil.

Take of the shavings of Mans Skull, that dy'd a violent death, four ounces, Amber Pulveriz'd; being mix'd together put them into a Glass Retort, fitted with a Recipient, and distil them in a Sand-bath with a gradual fire; distil the Oil mix'd with the Spirit, Flegm and Volatile Salt.

Besides the particular vertues which the volatile Salt and Spirit of Mans-Skull and Oil of Amber mix'd have against the Epilepsy, the Oil which is drawn from thence is highly esteem'd for the cure of this Malady, being given once a month every morning in some Cephalick water, from three or four, to five or six drops. You may also anoint with it the inside of the Nostrils, the Temples and the sutures of the Skull.

An Oil or Liquor of Antimony.

Take Hungarian Antimony, eight ounces, Sugar Candy six ounces; having pulveriz'd and mix'd them, put them into a Glass Retort, and distil them in a Sand bath with a Gradual fire, and keep the Liquor. This

This Liquor is highly esteem'd for the cure of Intermittent Agues, being given in white wine from three, to five or six drops, at the beginning of the fit, and reiterating the dose, if the fit return.

An Oil against Deafness.

Take Press'd Oil of Leeks, Bitter Almonds and Laurel, of each, two ounces; Spikenard, Castoreum, and Coloquintida shred, of each one dram. Juice of Rhue, and White-wine of each, an ounce and a half. Put all these into a Mairass close stopp'd, and let them digest 24 hours in a luke-warm Maries Bath, then increasing the heat of the Bath, boil them to the Consumption of the moisture, then strain and press them out; keep the Oil for use, mixing with it afterwards six grains of the best Musk.

This Oil put lukewarm into the Ears, wonderfully helps deafness in them that were not born deaf.

A Precipitate against the Jaundise.

Take Crocus Martis prepar'd with Sulphur, one ounce; Choice Rhubarb and leaves of Senna cleans'd, of each half an ounce. Choice Cinnamon, Salt of Wormwood and Tamariks, of each two drams. Saffron one dram. Pulverize what are to be pulveriz'd, and with a sufficient quantity of Syrop of Mugwort make an Opiate.

This Opiate is very proper to cure the Jaundise, especially in Virgins. The dose is from two drams, to half an ounce in Bolus, or mix'd in White-wine, or some proper decoction. Reiterate the dose as occasion requires.

An Opiate for the Tooth-ach.

Take Camphire two drams. Opium one dram. Castor half a dram. Having pulveriz'd them, mix them with Syrop of Gillow-flowers, and make an Opiate.

This is an excellent Opiate to aswage the pain of teeth: when any one is rotten, put never so little in the hollow of the tooth, and leave it there; renewing application as often as need requires.

A Paste to scoure the hands.

Take Bitter Almonds peel'd half a pound. Bruise them in a Marble Mortar, sprinkling upon them never so little Aqua-Vita; then add two Yolks of Eggs, Narbon Honey, an ounce and a half. Orrice root finely pulveriz'd; one ounce, mix them all together and reduce them into a Paste for use.

This Past is excellent to cleanse the hands, and is easily prepar'd. There is no need of wetting it in water, for it may be us'd as it is prepar'd.

Another Paste for the same.

Take bitter Almonds peel'd and perfectly well bruise'd, and Crums of white bread, of each four ounces. Infuse the bread three hours in new Milk, then being well mash'd in a Marble Mortar, mix it with the Almonds. Afterwards take two yolks of Eggs, Narbon Honey one ounce. Burnt Alum pulveriz'd, and Balsome of Peru, of each one dram.

This Paste is at least as good as the former; it suffices to rub the hands without washing. For it falls off of it self, smoothing and whitening the hands very much.

Pills against Cachexies.

Take Trochiskes of Albandal, half an ounce; Myrrh, choice Aloes, Galbanum, Ammoniack, an. three drams. Mercury precipitate prepar'd with Gold two drams; Scammony, Jalap, the whitest Agarick, of each one dram and a half. Press'd Oil of Nymegs one dram, of Amber, Cinnamon and Cloves, of each six drops. Extract of Juniper as much as suffices.

These

These Pills are very much recommended for the cure of Cachexies, in Quartan Agues, the Dropsy, the Jaundise, and the retention of the Menstruums. The Pills must be made up in two grains apiece, and taken two or three before Supper, and an hour before Bed time: and may be taken as oft as necessity requires.

Diuretick Pills.

Take Chios Turpentine, and white Vitriol finely pulveriz'd, an. two ounces. Mix them, and make a Mass of Pills.

The vomitive quality of the Vitriol being corrected, and alter'd into Diuretick by the mixture of the Turpentine, these Pills work good effects in all difficulties of making water, being given from half a dram to a dram.

Sennertus's Fever Pills.

Take Oil or Liquor of Antimony Sugar'd, one ounce. Aloes Succotrine, half an ounce; Ambergrise two drams. Saffron two drams and a half. Make a Mass of Pills according to art.

These Pills are proper to cure intermitting Fevers, giving them from seven or eight, to ten or twelve grains at the coming of the fit. They purge downwards and sometimes provoke sweat.

Pills for the Dropsie.

Take Elaterium, and Extract of Aloes prepar'd with juice of French Orrice, of each half an ounce. Choice Mastick pulveriz'd two drams. Make them up into Pills according to art.

These Pills powerfully purge Hydropick VVaters. They are to be taken in a morning fasting from six, to twelve or fifteen grains; using them as often as occasion requires.

Pills against the Green-sickness.

Take Extract of Mars prepar'd with Musk one ounce. Extract of Aloes Succotrine prepar'd with juice of Succory, six drams. Extract of Rhubarb half an ounce. Extract of Saffron two drams. Distill'd Oil of Cinnamon six drops. Mix them together and make a Mass of Pills according to art.

These Pills are excellent to cure the Green sickness in young Virgins; taking a scruple at a time in a morning fasting and drinking after them two or three ounces of VVormwood VVine; and walking after it about an hour, for several mornings together.

Pectoral Pills.

Take Tears of Storax two drams, Extract of Liquorice a dram and a half, Extract of Saffron four Scruples, Labdanum, Olibanum, choice Myrrh, and extract of Opium, of each one dram, Ambergrise one Scruple, Syrop of Citron Rinds, as much as suffices. Make a Mass according to art.

These Pills are excellent to stay defluxions that fall upon the Lungs; and to assuage the violence of Coughs. The dose is from five or six to eight or ten grains.

A Powder against the Gout.

Take Hermodactiles, chosen Turbith, Castus, Mechoachan, and Scammony, of each one

one dram. Sugar Candy two drams. Make a powder of all together for use.

This Powder is proper to purge the Scrofulities that feed the Gout. It must be given in white-wine in a morning fasting from a Scruple to a dram.

An Astringent Powder.

Take Bole Armenian, Seal'd Earth, of each two ounces, Pomegranate flowers, Red-Roses, Dragons-blood, Seeds of Sumach, and Whortle-berries, Frankincense and Mastick, of each one ounce. Make them all into a powder for use.

This Powder may be given in wine, or in some decoction, from a Scruple to a dram, in losses of blood, and in weaknesses of the stomach and Intestines. It may be also apply'd outwardly, incorporated with whites of Eggs, Vinegar, or some astringent water or decoction, like a Cataplasme, to stop defluxions, and loss of blood, and to strengthen and close the parts.

A famous Bezoardick Powder.

Take Roots of Angelica, Spanish Counter Poison, Virginian Dragons wort, of each half an ounce. Oriental Bezoar, Powder of Vipers and Mineral Bezoar, of each three drams, Unicorns-horn, and prepar'd Pearls, of each two drams. Reduce them all into a very fine Powder, and mixing with it Oils of Angelica, Citron-rind and Cinnamon, of each three drops, keep it for use.

This is an excellent powder against all sorts of Poisons and Venoms. For in fortifying and defending the Noble parts, it expels the Malignity by sweat, or by insensible Transpiration, given in Spanish wine or some Cordial Liquor from a Scruple to a dram.

A Caustick Powder, or a Specifick Corrosive of Paracelsus.

Take Corrosive Mercury, Sublimate three ounces; Salt Ammoniac, two ounces. Having powder'd them together, and put them into a Matraass, pour upon them one pint of Aqua-Fortis, which being evaporated in a moderate Cinder-bath, till the Ingredients have acquit'd the consistence of a Paste: dry the whole mass with a moderate heat, and reduce it into powder for use.

This Powder Cauterizes speedily and violently superfluous flesh, and such excrescencies as are to be taken away. Its quick operation, and the regard which is to be had to the nature of the Corrosive Sublimate, require much prudence in the use of it. So that you are to put but a very little on at a time; and to use it only upon strong bodies, and to apply it upon those parts of the body which are distant from the Emunctories, and Noble parts:

A Dentifrice Powder.

Take Pumice Stone burnt, white Corral, Cuttle fish bone, and Cream of Tartar prepar'd upon Porphyry, the Root of Florence Orrice finely powder'd, an. half an ounce; Salt Ammoniac pulveriz'd one dram, Oriental Musk, and Ambergrise, an. three grains. Mingle them and make a Powder for use.

This Powder is very proper to cleanse and whiten the teeth. You may use it as it is, or mix'd with Syrup of Corral, or dry Roses, or with Honey of Roses, and reduce it into an Opiate before you rub your teeth.

A famous Anti-epileptick Powder.

Take the Secondines of a Woman of a Sanguine complexion, brought to bed of her first Child, being a boy, dry'd and cleans'd from the Membranes, one ounce. Roots of white Piony, and seed of the same, of each half an ounce; shavings of Mans Skull, put to a violent death, shavings of Unicorns horn, hoof of an Elk, Misslets of the Oak, Roots of wild

wild Valerian and swallow-wort, of each three drams; Pearls and Coral prepar'd, Contrayerva Stone, white Amber, and seed of Goats Rue, of each two drams, Oriental Musk and Ambergrise, of each one Scruple, mingle them and make a Powder for use.

This Powder produces good effects in the accidents and cure of the Epilepsy, given in Cephalick Waters from half a Scruple to half a dram. It may be mingled with Solid and soft Electuaries, and the use of it continued as occasion requires.

An Incarnating Powder.

Take Oblibanum, Sarcocoll, Mastick, Myrrh, Aloes, Mummy, long and round Birth-wort, of each one ounce, make a Powder of all together for use.

This Powder cleanses wounds, and causes the flesh to grow, being lay'd to them alone, or mix'd with Ointments, or in proper waters.

A Powder to assuage the pains after delivery.

Take Roots of Athamantick Spiguel, and bigger Cumsfrey, of each two drams, Amber prepar'd, Peach Kernels cleans'd, of each one dram and a half, Cinnamon, Mace, and Saffron, of each two Scruples. Mingle them and make a Powder for use.

This Powder is highly effecm'd to assuage the tormenting pains that happ'n to most Women after delivery. It is to be given in Broth from one Scruple to two.

It is credibly affirm'd that the blood which issues from the string of the Navel, which the Midwife cuts with her Scissars, given hot to the weight of half an ounce, is a soveraign remedy to prevent and appease these pains.

A Powder of Violets.

Take Roots of Florence Orrice one pound, yellow Sanders, five ounces, Red Roses, four ounces. Storax, Benjamin, of each two ounces, Ciperus and tops of Marjoram, of each one ounce. Lignum Rhodinm, half an ounce, Cloves, Aromatick Reed, and Flowers of Lavender, of each two drams; Make all these into a coarse Powder for use.

The odour of Violets which the Orrice imparts to the powder, gives it its name. This Powder is to be put among Cloaths and Linnen.

An exquisite Powder of Vipers.

Take Vipers Exenterated with the hearts and Livers pulveriz'd three ounces, white Sugar powder'd two ounces; distill'd Oils of Angelica and Citron Rind, of each half a dram. Reduce all these into a Powder.

This Powder being aromatiz'd by the Oils, and sweeten'd by the Sugar, works more effectually then the ordinary Powder of Vipers. It is to be given in proper Liquors from a Scruple to a dram.

A Chalybeate Salt against an ill habit of body.

Take Vitriol of Mars, one ounce, Sal Prunelle, two ounces, Salt extrahed out of the Dead head of Aqua-Fortis, three ounces; Pulverize them together; then put them into a Glass Cucurbit, and set them in a Sand-bath with a gradual fire augmented till the matters look red, flow like water, and at last turn to a red hard Stone, which is to be kept for use.

This Salt is highly recommended in Cachexies and Scorbutick distempers to purge the Mass of the blood, create an Appetite, open the passages of the Urine, divert Fluxes of Rheume, provoke sleep, and to carry off bad humours by stool, Urine and Sweat, or by insensible transpiration. It is to be powder'd and giv'n

In some proper Liquor from seven or eight, to twelve, fifteen or twenty grains.

A Diuretick Salt.

Take the Urine of a healthy man, put into it as much Hungarian Vitriol powder'd, as it is able to dissolve; make the dissolution in a large Vessel, that there may be Room for Ebullition. Which being ceas'd, put the Liquor into a Glass Cucurbit, cover'd with its head, and distil off the flegm and Spirit in a Sand bath; first with a slow fire, then with a gradual fire increas'd, and sublimate the volatile Salt at last.

This Salt compos'd of the volatile Salt of the Urine, and several acid particles of the Vitriol, vigorously expels ferous humours by Urine, the passages whereof it opens. It is to be given in White-wine or Diuretick waters or decoctions from a Scruple to a dram. It is of great use in Dropsies dissolv'd in opening decoctions. For which purpose you may mix the Spirit with your ordinary drink. The Flegm apply'd to the Gout, allwages the pain thereof. It is also good to allay the Inflammations of the eyes.

An Epileptick Spirit.

Take Flowers of Lilly Convally, Lavender, Tilet, Sage Primroses and Rosemary, of each two handfulls. Gather the flowers in their Season, and macerate them all together in six pints of Spirit of Wine rectify'd. Then add to them Mistletoe of the Oak, Roots of Valerian, and Male Piony, of each four ounces, being bruis'd and macerated eight days in a pint of Malmsey; Cinnamon, Cloves, Mace and Nutmegs, of each half an ounce; mix them all together, and distil them in a Glass Cucurbit cover'd with its head, in a Sand bath, according to art; and preserve the Spirit for use.

This Spirit is very proper for the ease and cure of Epileptick diseases. It is to be given from two drams, to half an ounce alone, or mix'd in Cephalick Liquors. It may be also put up into the Nostrils, apply'd to the Temples, and the sutures of the Skull.

An Anti-scorbutick Spirit.

Take Juniper Berries, and Elder Berries bru'd, of each four pound, seed of Scurvy-grass, Blessed Thistle, the Garden Cresses, of each two pound. Juices of Scurvy-grass, Water Cresses, Water Pimpernel, Horse-raddish, Arsemart, Money wort, Celandine and Fumitory, of each two pound. Put them all into a fit Vessel, and having mix'd with them a pint of Ale-yest, set them to ferment in a Stove, and when that is over, distil them, and reserve the Spirit.

This Spirit is excellent for the cure of Scorbatick diseases. For it breaks the force of the acids which hinder Circulation, procuring its natural Motion, and expelling its Impurities. It is to be taken from two drams to half an ounce, in a morning, fasting, in Spanish-wine, or in the Spiritous Water that follows the Spirit after its Distillation.

A Treackle Spirit.

Take Roots of Masterwort, Angelica, Athamantick Spignel, and bigger Valerian, of each three ounces, Juniper Berries, and seed of Bishops weed, and Sefeli of Mar-silles, of each one ounce, approv'd Treacle four ounces. The Roots and Seeds being bru'd, macerate them eight days with the Treacle in two pines of Spirit of wine rectify'd; then make your distillation according to art, and preserve the Spirit.

This Treacle Spirit powerfully resists all sorts of Poisons. It is to be given in Spanish-wine, or in Cordial Liquors, from one to three or four drams. It may be also put up into the Nostrils, or apply'd to the Temples and sutures of the Skull.

A Uterine Spirit.

Take Roots of round and long Birthwort, Piony, and Lesser Valerian, of each two ounces. Castor one ounce. Dry tops of Wormwood, Mugwort, Tansey, Fetherfew, Elder and Camomil Flowers of each one handful. Having bruise'd and cut them altogether, let them macerate three days in four pints of rectify'd Spirit of Wine; then distil them according to art, and keep the Spirit.

This Spirit is very effectual to suppress the vapours that rise from the Matrix, and to open its obstructions. It is to be given from one to two or three drams at a time, in Hysterick Waters or decoctions. It may be also put up into the Nostrils, apply'd to the Temple, or upon the Navil.

An Epileptick Syrup.

Take Mistletoe of the Oak, Roots of Piony, and shavings of Mans Scull, violently kill'd, of each half an ounce. Flowers of Lilly Convally, Lavander, Tilet, Rosemary, Sage, Marigolds of each one little handful. Bruise the Mistletoe and Roots and put them together with the Mans Scull and flowers into a Matraass, and pour upon them one pint of rectify'd Spirit of Wine, and having exactly clos'd the Vessel, let them macerate a week together over a moderate heat. Then draw off half the Spirit of Wine with a gentle heat, and preserve it apart. The remainder being press'd and filter'd, reduce it into the consistence of a Syrup with eight ounces of purest refin'd Sugar. Then aromatize it with two drops of distill'd oil of Cinnamon.

This Syrup is highly commended for the prevention and cure of the Epilepsy. It is to be taken alone, fasting, from half an ounce to an ounce. You may reinforce the dose with a dram of the Spirit drawn off, or mix the Syrup with Cephalick Waters or decoctions.

A Scorbutick Syrup of P. Forestus.

Take Juices of Scurvy grass, and water Pimpernel depurated of each three pints, pure refin'd Sugar two pound. Make a Syrup according to art.

The use of this Syrup is very successful in Scorbutick Maladies, tak'n from one spoonful to two.

Tablets of Saffron of Mars.

Take Saffron of Vitriol of Mars half an ounce, Earth worms wash'd in Wine dry'd and pulveriz'd, two drams. Cinnamon finely pulveriz'd half a dram. Refin'd Sugar boil'd in Mugwort Water, six ounces. Make Tablets according to art.

These Tablets are proper to open obstructions of the bowels; and particularly those of the Matrix. The dose is from two drams to half an ounce. They are to be taken in a morning fasting, drinking after them two or three ounces of Wormwood VVine.

Diuretick Tablets.

Take Roots of Rest Harrow, Eringes, Fennel, Butchers Broome, and Stone Parsley of each half an ounce, Seeds of Burdock and Groundfil of each two drams, make a decoction of all together in two pints of Raddish water. Boil the straining according to art with half a pound of double refin'd Sugar, into Tablets, of two drams weight.

They who are troubl'd with gravel and stoppage of Urine, may use these Tablets with success, taking one or two in a morning fasting.

Tablets to stop a Gonorrhœa.

Take Seeds of Plantain, *Agnus Castus*, white Poppies, Rhue, whortles and Henbane, Red Roses, dry'd Mint, and Coral prepar'd, of each two drams. Reduce them all into a very fine powder, and make Tablets thereof with Muscilage of Gum Tragacanth, and double refin'd Sugar, of each eight ounces. Make every Tablet half an ounce in weight, and let the Patient take one every morning fasting.

These Tablets are proper to stop Gonorrhœas after the use of general Remedies.

Tablets against Burstness.

Take Root of the greater Cumfrey dry'd, one ounce, Red Roses cleans'd from their bottoms, choice Mastick, red Coral prepar'd, and Dragons blood, of each two drams. Sugar Candy one pound. Powder all these, and make them into Tablets of two drams weight with Muscilage of Gum Tragacanth.

These Tablets are highly commended to fortify the parts of those who are subject to burstness: provided they use necessary Trusses. Take one at a time at any hour, fasting, and continue the use of them as need requires.

Pectoral Tablets.

Take Pulp of the Root of Althea, one ounce, Powder of Florence Orrice Root, and Liquorice shav'd, an. two drams; Flowers of Sulphur, two scruples, Flowers of Benjamin, one Scruple, refin'd Sugar eight ounces. Make up the whole into Tablets with Muscilage of Gum Tragacanth.

These Tablets give great ease to those that are troubld with violent Coughs; take half a one at a time, at a distance from meals, at any hour of the day, when you are disturb'd by the Cough.

A Cerate for a Mask for Women.

Take whitest wax, four pound, Sperma Ceti, two ounces. Oil of the four greater cold seeds cleans'd extratted without fire, and Bismuth precipitated, an. three drams. Borax, and burnt Alum finely powder'd, of each half a dram. Melt and mix them in Balneo Maria, and at the same time dip and spread the cloath.

This preparation to line Womens Masks is very true and easy, and fit to preserve the complexion of Ladies.

A Cerate to be laid upon the Breast after Child-bearing.

Take Oil of Roses six ounce, Periwinkle trois'd, three ounces; Juices of Mint and lesser Sage, of each one ounce and a half. Boil them over a soft fire to the Consumption of the juices, then strain and press them. Into the press'd oil melt yellow wax cut into pieces, three ounces, when the Ingredients are half cold, add half an ounce of choice Mastick finely powder'd, and then dip the cloth in it.

This Cere-cloth is proper to prevent the Breasts from growing big after Child-bearing; as also to change the course of the Milk, and to turn it downward. The Cere-cloth must be laid hot upon the breasts, and wrapt up with warm cloaths, and be continually apply'd till the Milk be gone.

Odoriferous Trochisks, or little Cyprian Birds.

Take Powder of Willow Coals, three ounces, Labdanum two ounces, Storax, Benjamin an. half an ounce, Mastick, Sweet Tacamahacca, and yellow Amber, two drams. Lignum

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Rhodanum

Rhodium, a dram and a half. Make the whole into Trochisks mix'd with muscelage of Gum Tragacanth extract'd with Rose-water, and dry them in the shade.

This is an excellent perfume for Chambers and Rooms of Entertainment.

Other Trochisk, or little Ciprian Birds.

Take Coals of Rosemary pulveriz'd, four ounces. Labdanum two ounces. Storax and Benjamin, of each one ounce. Roots of Cyperus, Aromatick Reed, Mastick and Amber, of each two drams, Cloves one dram, Musk, Ambergrise and Civet, ten grains. With a muscelage of Gum Tragacanth extract'd with Orange flower water make up yont Trochisks and dry them in the shade.

They are sweeter then the former, but their use is the same.

Other Richer Trochisks.

Take Resin of Storax, prepar'd according to my directions, Choice Benjamin and Sallow Tree ashes, of each one ounce, sweet Tacamahacca very fine, and Lignum Aloes finely pulveriz'd, of each half an ounce; Ambergrise one dram, Musk half a dram. Zibet, six grains. Distill'd Oils of Lignum Rhodium, Cinnamon, and Cloves, of each six drops. Make up the Trochisks with Gum Tragacanth extract'd with Rose-Water.

These Trochisks are much dearer, but they are incomparably much more sweet.

An Ointment to cure Burns.

Take new Butter two pound. The Butter being melted over a moderate Fire, put into it, when tak'n off the Fire, as much Snow as the heat of the Butter can conveniently melt. Then scumming off the Butter that swims above the Snow-water, add to it an ounce of Venice Ceruse powder'd. Camphire powder'd with never so little Spirit of Wine one dram; and mix it up into an Ointment.

This Ointment is highly esteem'd for the cure of all sorts of Burns.

Another Ointment for Burns.

Take Barrows Grease, one pound, White-wine, two pints, Leaves of lesser Sage, Ground Ivy, and Wall Ivy, Marjoram and bigger Housleek, of each two handfuls. Boil them together over a soft fire to the consumption of the moisture, stirring them often. Then strain and press them out strongly, and keep the Ointment.

This Ointment is no less commended then the former for the cure of Burns.

A Yellow Ointment.

Take Butter boil'd over a gentle fire, and purify'd from dregs and moisture, six pound; Yellow Wax, four pound; Resin, two pound, Venice Turpentine one pound. Make an Ointment according to art.

This Ointment is made somewhat solid to the end it may lye upon the parts. It is proper to cure Ulcers of the Legs, Tettars, Childblains, Chaps and Rists of the breasts and other parts of the body.

A black Ointment to open all Apostemes, though Pestiferous.

Take Common Oil two pound. White and Yellow Wax, Rams fat near the Kidneys, Pure Resin, Black Pitch, and Venice Turpentine, of each half a pound. Choice Mastick finely pulveriz'd two ounces. Make an Ointment according to art.

This Ointment is very proper to break all sorts of Apostemes, as also Pestilential

tial Carbuncles and Venereal Bubos. The Consistency of this Ointment is harder then of other Ointments. It is to be us'd from the first breaking of the Aposteme, till the cure be perfected.

A most approv'd Ophthalmick Ointment.

Take Ointment of Roses, two ounces. Narbon-Honey half an ounce, Choise Aloes, and Sarcocol three days infus'd in Womans Milk without stirring, but changing the milk one a day, of each two drams. Powder of white Trochisques of Rhases, Bolt-Armenian, and Tutia prepar'd, of each four Scruples, White Vitriol and Sugar Candy, of each once dram. Powder of Saffron, Myrrh and Olibanum of each two Scruples, Theban Opium 15 grains. Make an Ointment according to art.

This is an excellent Ointment for infirmities of the eyes. Put a large drop into the eye, and let it melt, and sleep upon it: in the morning wash with Plantain Water or white Rose-water.

An Ointment, to catch Fish.

Take Mans and Cats fat of each half an ounce, Mummy finely powder'd three drams; Cummin seed finely powder'd one dram. Distill'd Oils of Anise and Spike of each six drops, Civet and Camphire five grains. Make an Ointment according to art.

This Ointment has a wonderful vertue to draw Fish. Rub the Line with it, and bait the hook with an Earth-worm, and then holding the Line a while in the Water, you shall see the effects of it.

A Green Ointment.

Take new Butter boil'd and purify'd 4 pound, Rosin, and Burgundy pitch, of each one pound, Yellow Wax, four ounces. Make an Ointment according to art, and when it is off the fire, add two ounces of Verdigrise powder'd, stirring the whole till the Ointment be cold.

This is a wonderful Ointment to cleanse and heal all sorts of Wounds and Ulcers.

A Specifick Purger and Sudorifick of Helmontius.

Take raw Antimony and Salt Ammoniack powder'd and mix'd together, of each six ounces, Sublime the Combustible red Flowers according to art, of them take four ounces: Pure Niter eight ounces, let them subliminate in subliming pots, and gather the Flowers together without any wast. Dulcify the Flowers with hot water, till there be no more Saltiness remaining. Upon this Powder dry'd over a very soft fire, pour the purest Spirit of Wine, four fingers above the matters. Put them all into an Alembick with a Receiver luted to it, then distil them at first with a gentle fire, increas'd at length that the substances may boil to dryness. Expose the Powder being perfectly dry'd to the fire for an hour, and keep it for use.

I thought I could not better conclude my Pharmacopœa, then with this Remarkable Preparation of Antimony, which provokes sweat very powerfully, and opens the belly gently, being taken at a distance from meals, from twenty to thirty grains, in some Conserve, in Bolus, or dissolv'd in some Cordial water.

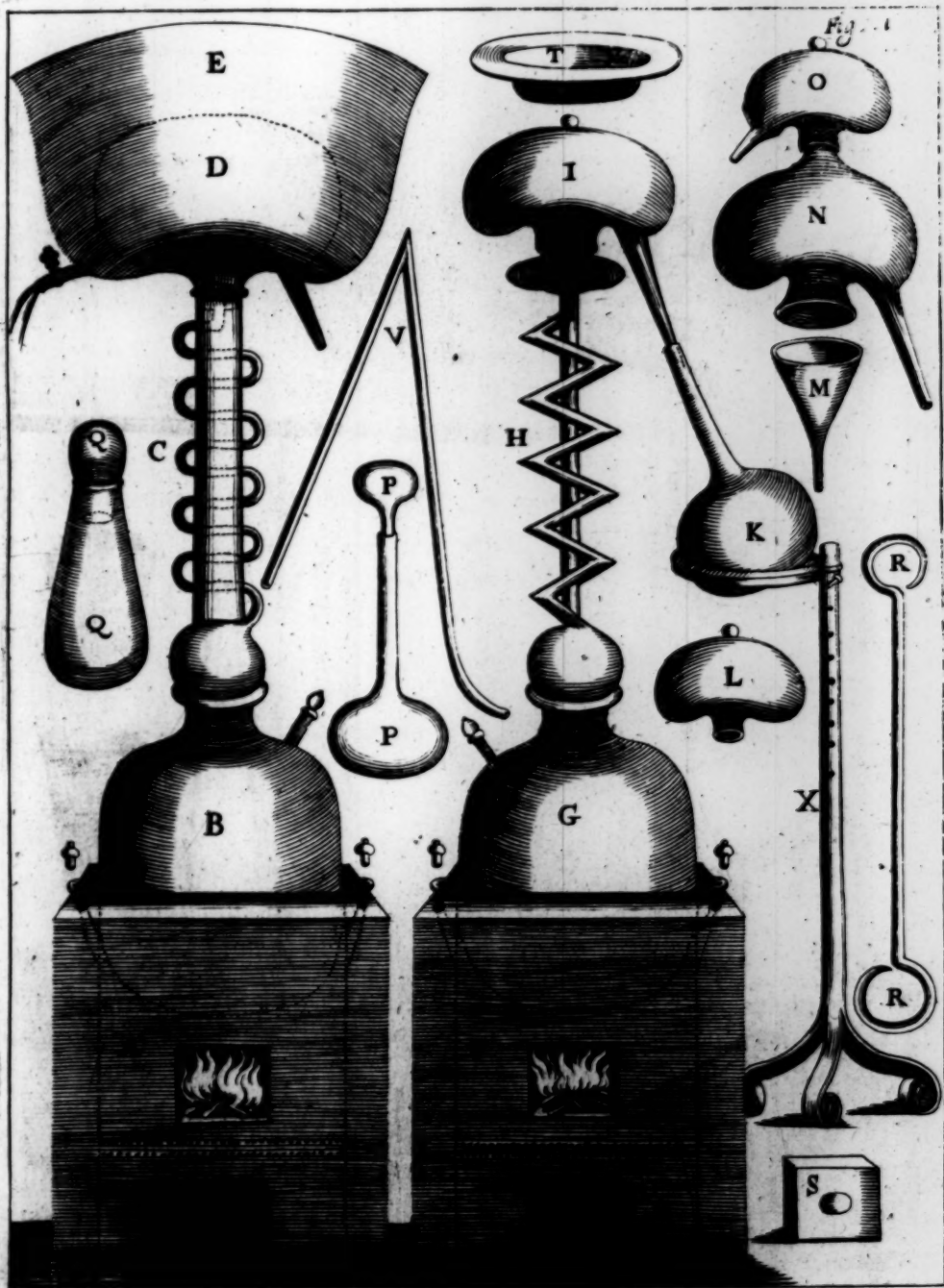
The End.

The Explanation of the first Figure.

- | | |
|---|--|
| <p>A A Furnace for the distillation of Spirit of Wine.</p> <p>B The Copper Vessel Tinn'd within, containing the Aqua Vitæ.</p> <p>C The Copper Serpentine resting upon a Pillar.</p> <p>D The head of the Serpentine.</p> <p>E The Refrigerent.</p> <p>F Another Furnace for the same use.</p> <p>G The Copper tinn'd Vessel containing the Aqua-Vitæ</p> <p>H The Tin Serpentine.</p> <p>I The Glass head.</p> <p>K The Recipient.</p> | <p>L A Blind head.</p> <p>M A Funnel.</p> <p>NO Two Glass heads, one upon another, the undermost of which is open at top.</p> <p>PP A Matrafs of Rent-counter.</p> <p>QQ Cucurbits of Rent-counter.</p> <p>R An Iron to cut off the neck of the Recipients.</p> <p>S The stopper to stop the door of the Furnace.</p> <p>T A Glass Platter.</p> <p>V The Pipe.</p> <p>X The thing that bears the Recipient for the Spirit of Wine.</p> |
|---|--|

The Explanation of the second Figure.

- | | |
|---|---|
| <p>A The Tower of the Athanor.</p> <p>BC Two Furnaces heated by the fire of the Tower.</p> <p>DD Two Canals containing the Coals.</p> <p>EE The uppermost openings of the two Canals.</p> <p>FF The doors of the two Furnaces.</p> | <p>G A Wind-Furnace.</p> <p>H The door of the Furnace.</p> <p>I The end of the Pipe that carries the wind into the Furnace.</p> <p>L The Bellows.</p> <p>MM Pieces of Wood that bear & serve to move the Bellows.</p> <p>OO The</p> |
|---|---|





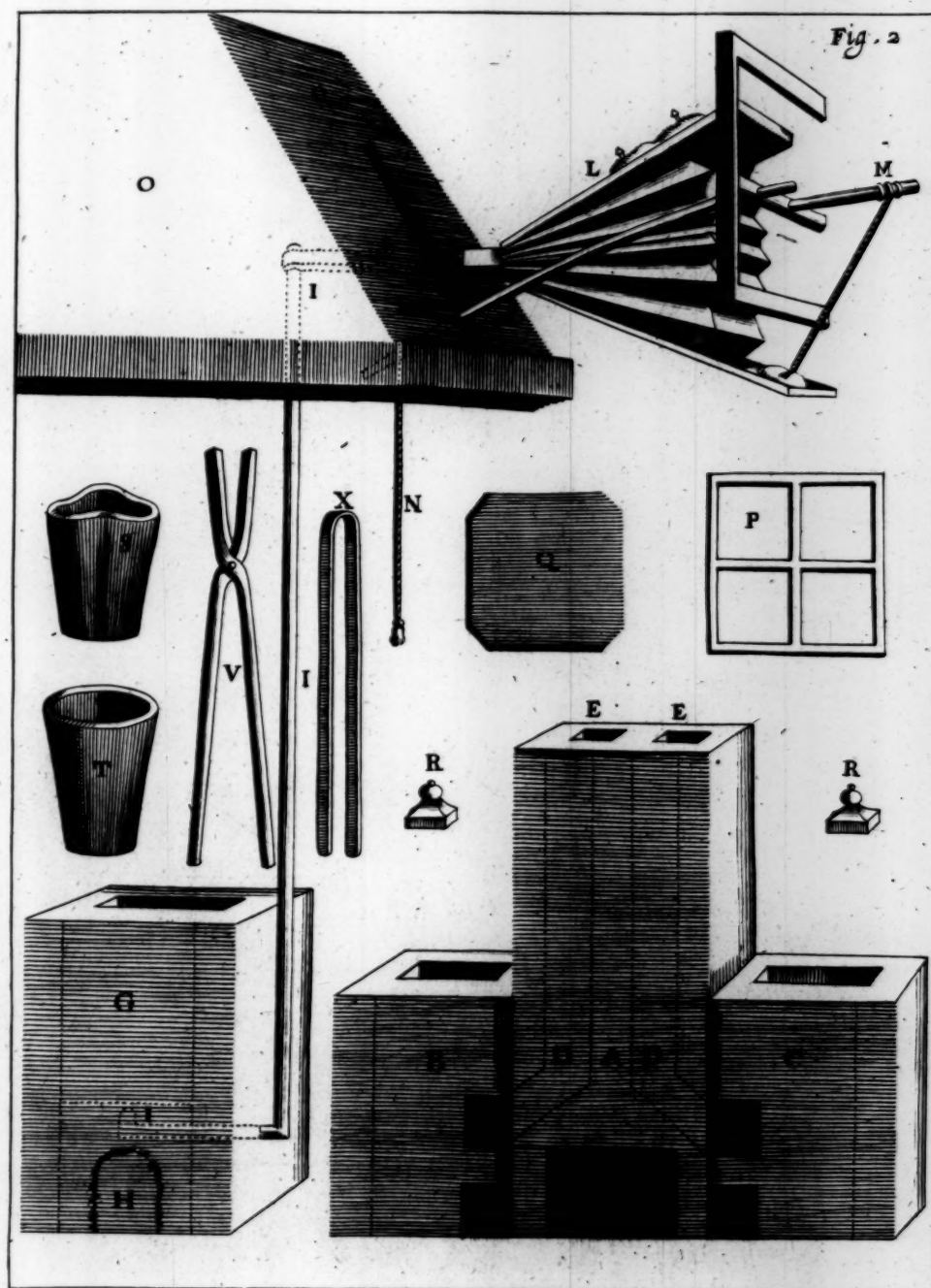
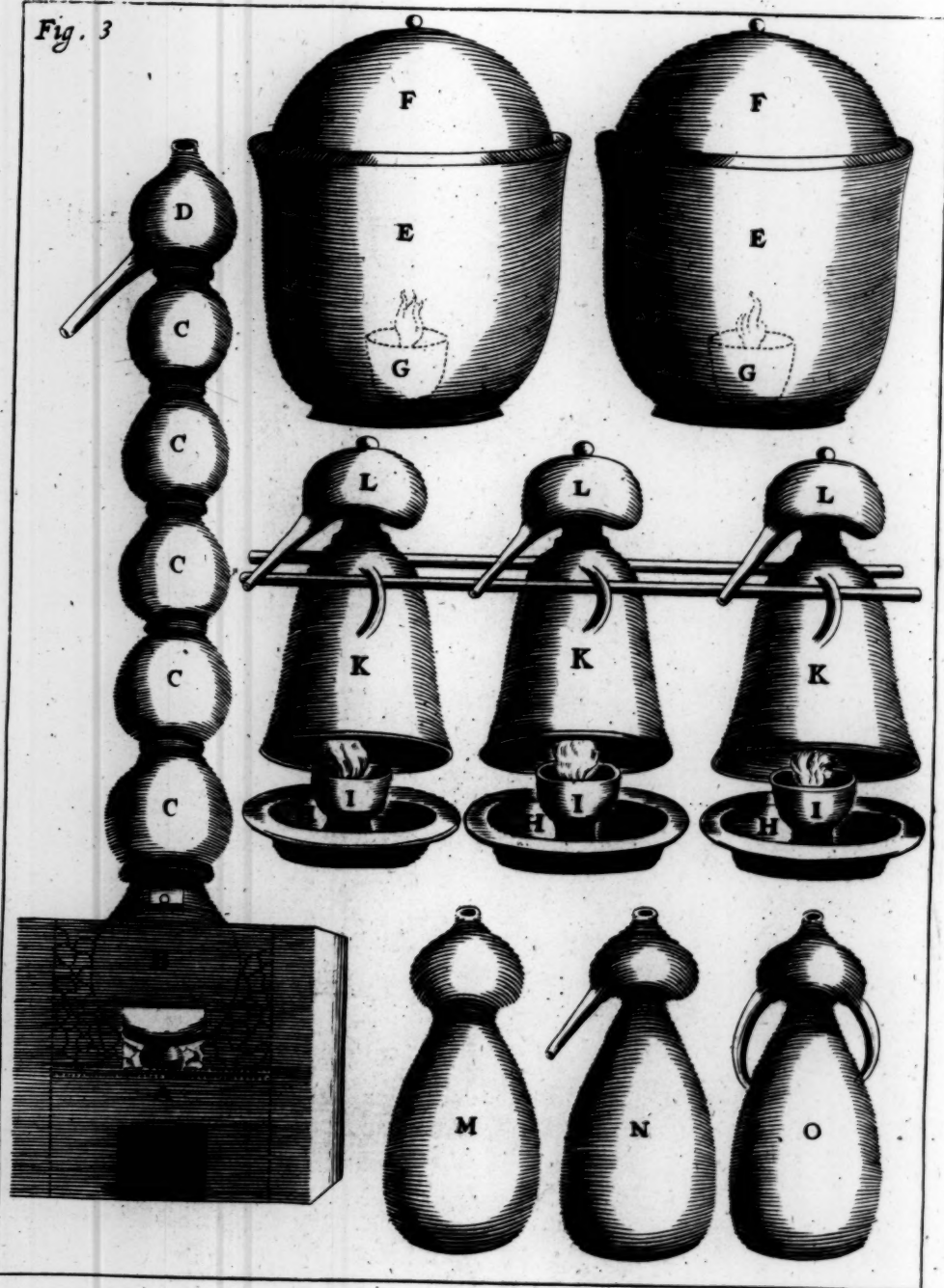
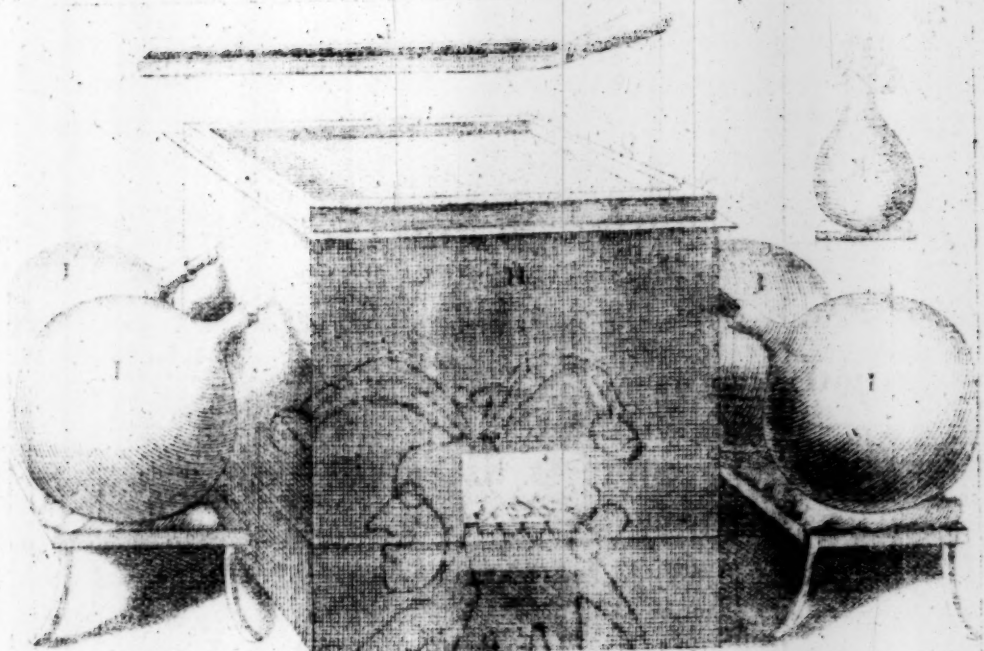
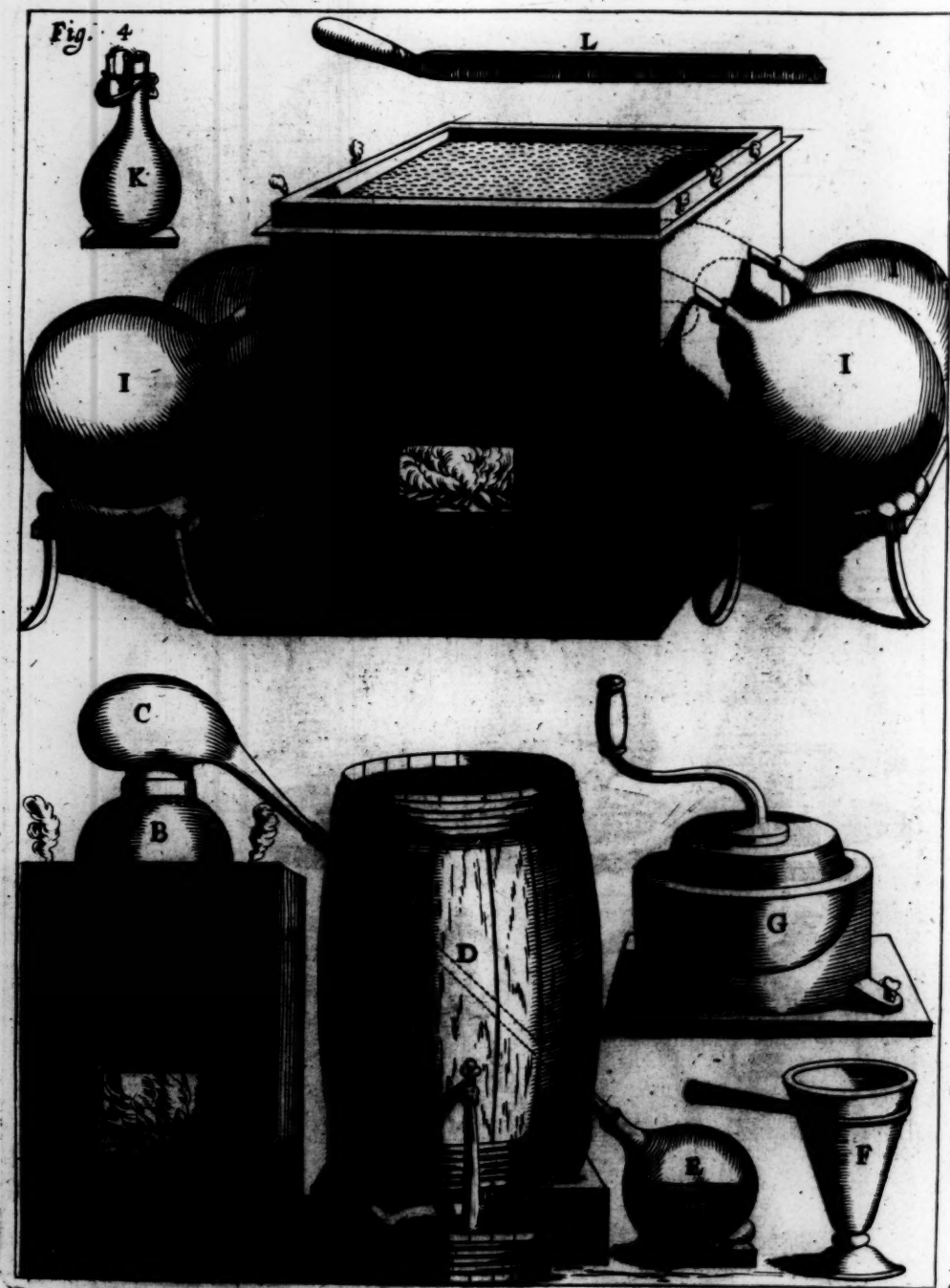


Fig. 3







- | | | | |
|----|--|----|--------------------------------------|
| OO | The Chimney. | RR | Stopels for the Canals of the Towre. |
| P | An Iron square serving instead of a Grate for the Furnace. | ST | Two Crucibles. |
| Q | A flat piece of Iron to lay upon the square. | V | Iron Pincers. |
| | | X | Iron Tongues. |

The Explanation of the third Figure.

- | | | |
|------|---|---|
| A | The Furnace for the Aludel. | the Sulphur. |
| B | The Aludel. | HHH. Three large Glass Platters. |
| CCCC | The Pots of the Aludel. | III Three Crucibles containing the Sulphur. |
| D | The head of the Aludel. | KKK Three Glass Bells. |
| EE | Great Earthen pots for the distillation of the Spirit of Sulphur. | LLL Three Heads. |
| FF | Glass Bells. | M A Vessel of Glass for Circulation. |
| GG | Crucibles containing | N A Glass Alembick all of one piece. |
| | | O A Pelican. |

An Explanation of the fourth Figure.

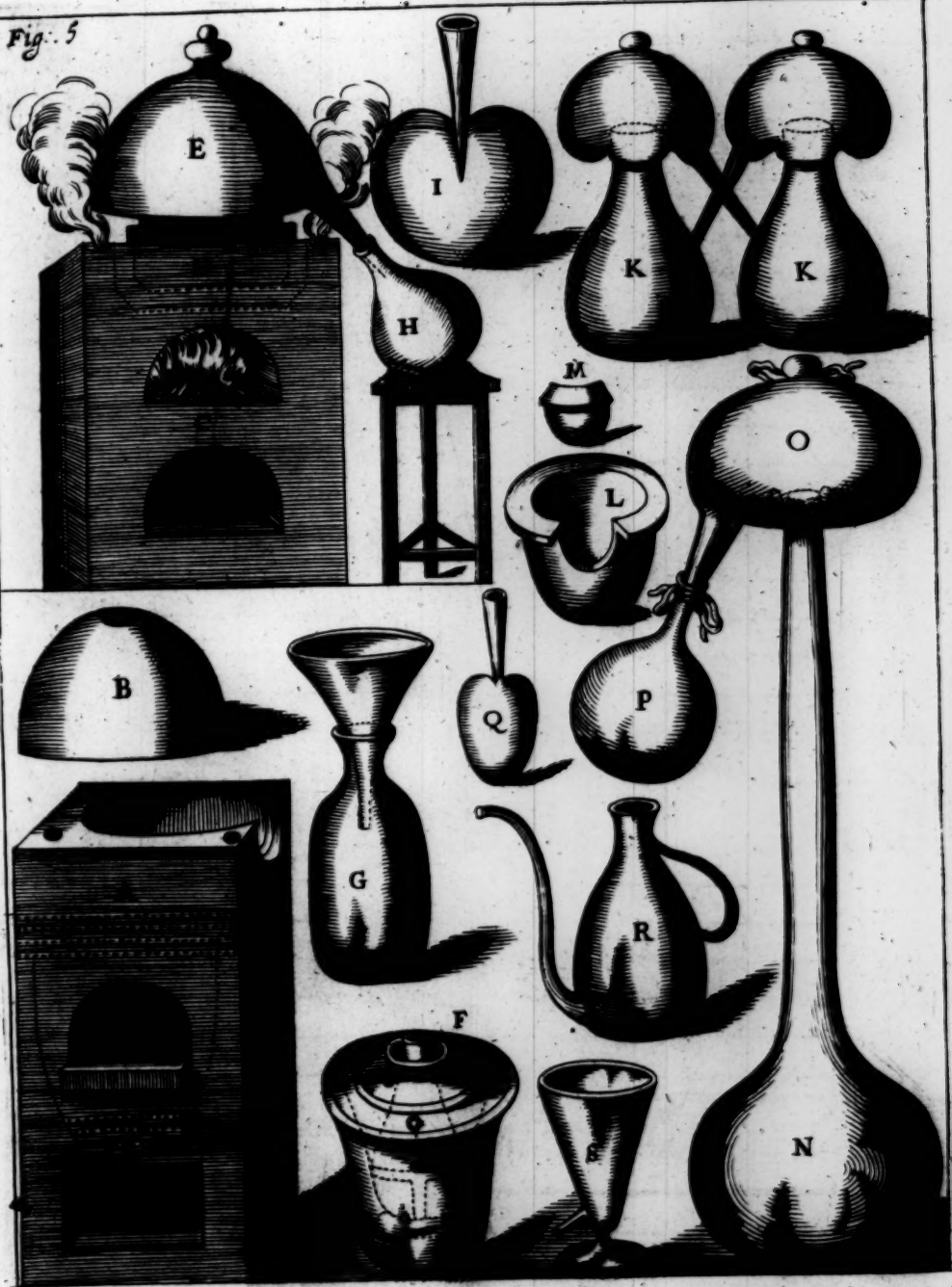
- | | | | |
|---|--|-----|---|
| A | The Furnace. | E | A Recipient. |
| B | A Copper Vessel tinned within. | F | The Iron horn for Regulus's. |
| C | The Moors head. | G | A Steel Mill. |
| D | A Barrel containing Water to cool the Liquor that distills, and the Pipe that carries the Liquor into the Recipient. | H | A Furnace for four Retorts at a time. |
| | | III | Four large Recipients. |
| | | K | A Vessel to separate the Oil from the distill'd |

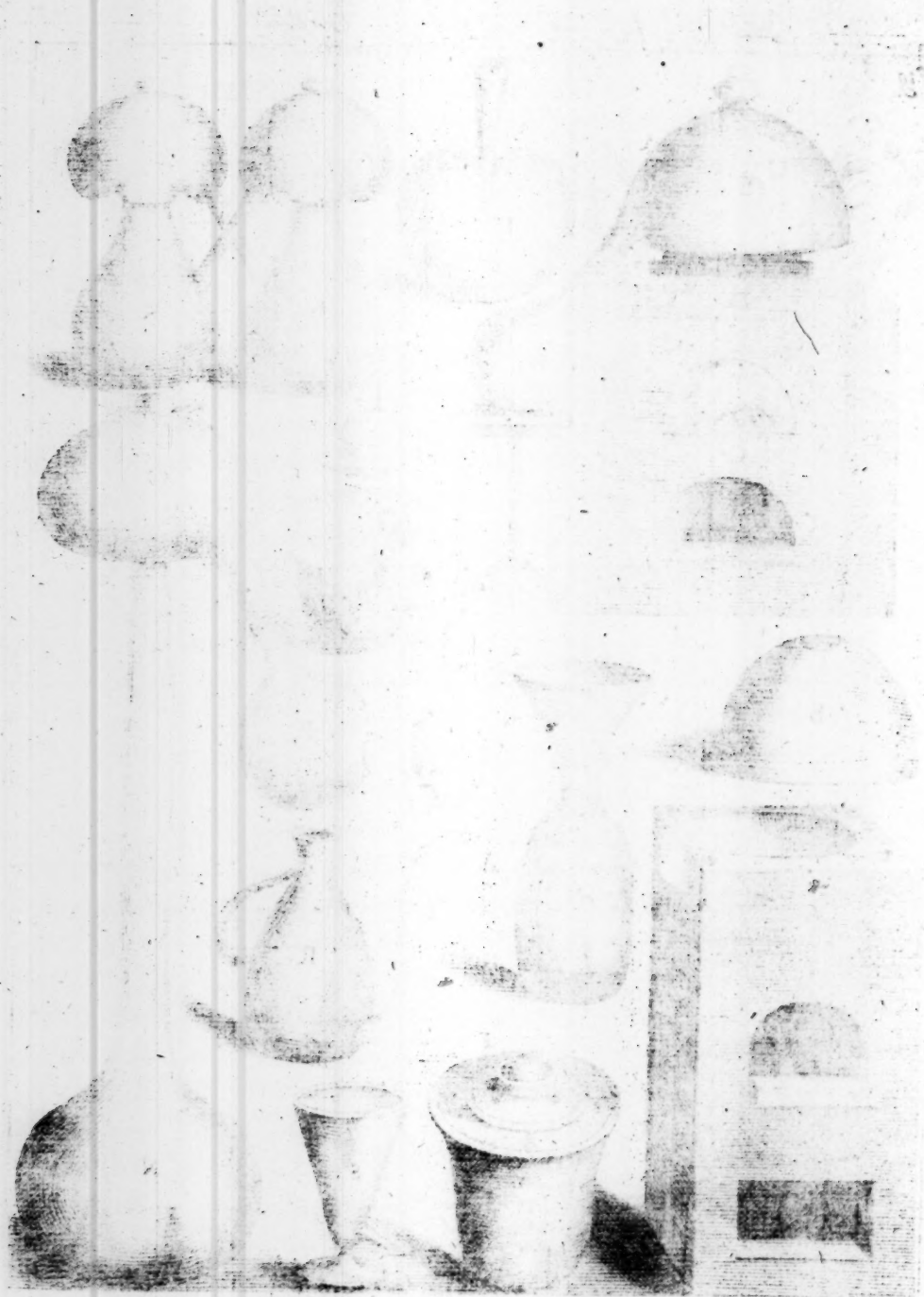
still'd Waters with a
weike.

An Explanation of the fifth figure.

- | | |
|---|---|
| A A Furnace of Re-
verberation. | I A Glass Hell. |
| B The Duomo. | KK Twins. |
| C A Furnace for the
distillation of herbs
in a Sand-bath. | L An Earthen Capsula. |
| D The Copper Vessel
tinn'd within, con-
taining the herbs. | M The stopple for the
notch of the Capsula. |
| E A Copper head Tin-
ned within. | N A Matrafs with a
long neck. |
| F A Copper Vessel for
the Balneum Mariae. | O The head of the
Matrafs. |
| G A Glass Bottle with
a Tannel for Filtra-
tions. | P The Recipient. |
| H A Recipient. | Q The Philosophers
Egg. |
| | R A Glass Vessel to se-
parate the Oile. |
| | S Another Glass Ves-
sel for the same use. |

Fig. 5





CHYMICALL CHARACTERS

Notes of Metalls

Saturne, Lead.	♄
Jupiter, Tinne.	♃
Mars, Iron.	♂ ♀
Sol, the Sun, Gould.	☉
Venus, Copper, Brasse.	♀
Mercury, Quicksilver.	☿
Luna, the Moon, Silver.	♁

Notes of Minerall and other Chymicall things

Antimony.	♁ ♦ ♦
Arsenick.	♁ ○ ○
Auripigment.	♁ ○ ○
Allum.	○ □
Aurichalcum.	♁ ♦ ♦
Inke.	♁
Vinegar.	+
Distilld vinegar.	+
Amalgama.	aaa E ##
Aqua Vita.	♁
Aqua fortis, or Sepa- natory water.	▽
Aqua Regis or Stygian water.	▽
Alembeck.	XX
Bortex.	7 7
Crocus Martis.	♁
Cinnabar.	♁
Wax.	+
Crocus of Copper or burnt Brasse.	♁
Asher.	⊥
Asher of Harts ease.	⊥
Calce.	⊥
Caput Mortuum.	☉
Gumme.	♁
Sifted Tiles or Flower of Tiles.	□
Lutum sapientie.	℥
Marcasite.	♁
Sublimatz Mercury.	+

Notes of Minerall and other Chymicall things

Mercury of Saturne.	♁
Balneum Mariæ.	MB
Magnet.	♁
Oyle.	☉ ☉ ☉
To purifye.	☉
Realgar.	♁ ☉ x
Salt Peter.	♁
Common Salt.	♁
Salt Gemme.	♁
Salt Armoniack.	✱ ✱
Salt of Kali.	♁
Sulphur.	♁
Sulphur of Philosophers.	♁
Black Sulphur.	♁
Soape.	◇
Spirit.	☉
Spirit of wine.	♁
To sublime.	☉
Stantum super Stantum or Lay upon lay.	☉
Tattar.	♁
Tidia.	♁
Talck.	X
A Covered pot.	▽
Vitriol.	♁
Glas.	○
Urine.	□

Notes of the foure Elements

Fire.	△
Aire.	△
Water.	▽
Earth.	▽
Day.	☉
Night.	☿

FINIS.

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